# SELECTIONS

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No. XXIV.

## Report

ON THE

## GUICOWAR'S HOSPITAL.

NOTICES ON KAREN NEE.

JUBBULPORE SCHOOL OF INDUSTRY.

STATEMENT OF CRIMINALS

DISPOSED OF BY THE

THUGGEE DEPARTMENT

AND

SURVEY OF THE ANDAMANS.

Calcutta:

JOHN GRAY, "CALCUTTA GAZETTE" OFFICE.

1858.

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# REPORT

ON THE

# GUICOWAR'S HOSPITAL.




To

MAJOR C DAVIDSON,

*Resident at Baroda.*

SIR,

I HAVE the honor to submit to you the following Report on His Highness the Guicowar's Hospital for the whole year 1856, and His Highness' Vaccine Establishment for the latter half of the same period.

2. Having formerly, in my Report on the Hospital for the first six months of its operation, ending with the close of 1855, narrated very fully every particular regarding that Institution then in its infancy, and having similarly laid before you very detailed accounts of the Vaccine Establishment as existing and in process of being augmented, I believe it will be more proper, on the present occasion, to submit for your information, and that of His Highness, merely a brief statement of the amount and nature of relief distributed by the above two Institutions under my charge.

3. I have much pleasure in being able to report that the Hospital, during the past year, has quietly and steadily become more and more, to the people of Baroda and the surrounding country, a known and familiar Institution; and this notwithstanding that the year has been a more than usually healthy one. Its progress, in the confidence of the people, is more particularly perceptible in the greater readiness with which sick persons come in the earlier, and consequently more curable,

stages of their complaints, and in the greater perseverance with which they continue to submit themselves to treatment. It is not so unfrequent now to find the familiar faces of old patients, more especially mothers with their children, presenting themselves at the hour of morning visit, seeking relief for new ailments almost at their commencement, and it is now much less common, than at first, for out-patients to desert after one or two days' attendance.

4. The experience of the last year has shown how great was the want for an Hospital at Baroda, not only for the fixed inhabitants, for of that there could be no doubt, but also, and in an extraordinary degree, for the floating population, consisting of wanderers and travellers of every caste, who—Hindoo pilgrims in vast numbers from Hindoostan and the Dakkhan, going to Dwarka in Katiawar and a few to Hinglaj in Makran; Mussulman from Hindoostan on the way to Surat, the port of embarkation for distant Arabia; and hosts of all classes in search of employment, principally from Hindoostan and the Dakkhan—swarm into and through Baroda.

5. A large number of the in-patients of the Hospital have belonged to the former or pilgrim class, and their condition has more than confirmed what—in my first Report last year—I said with regard to their state being worse than that of any other class of patients admitted. Fatigue, exposure, starvation, and disease, all acting and re-acting on each other, sometimes one, sometimes another inducing, or induced by the others, but all together too surely combining, render the pilgrim's profession one of inordinate mortality, and often leave in his exhausted frame just enough strength to enable him to crawl to the Hospital door, or sufficient vitality to induce others to carry him there, where he is found sometimes in an unconscious state, with the power of swallowing gone; occasionally with that faculty still present, but from the ruling prejudice of caste, strong even in death, rendered unavailing by an invincible objection to swallow aught prepared by stranger hands; and, but too often, with the power and will of deglutition indeed remaining, but at a period too late for the stomach to make any use of either food or medicine poured into it.

6. A great majority of the worst cases and deaths in Hospital were among these pilgrim and mendicant classes. Of those who recovered,

and were discharged cured or relieved, it is but reasonable to believe that a large proportion would, but for the shelter, food, and medicine afforded them in Hospital, have died. Although the building could not have been more favorably situated than it is for attracting the notice of sick strangers, being a most conspicuous object by the side of the Northern entrance to Baroda, still it is not to be supposed that it collects into its walls all the sick wanderers who, from other quarters, also enter the Town. In addition, therefore, to those who would die, but for their treatment in Hospital, and those who die there, there are probably, in such a large City, which is also so great a thoroughfare and centre of concourse to these classes, many other wanderers and beggars who, unheard of and unheeded, sicken and die.

7. These particulars, in connection with the numbers afterwards shown, may give some idea of the great mortality among the pilgrim and mendicant classes, doubtless annually amounting, in the one place—Baroda alone—to some hundreds, merely from want and exposure and diseases arising from these causes. This, too, is in Guzerat, a country well known for its hospitality to strangers and travellers.

8. One significant fact remains to be told, that of the pilgrims admitted into Hospital, nearly all are on their way *to* the place of pilgrimage; and but a few, a very small per-centage, are returning *from* it to their homes. It can scarcely be supposed, that the mental satisfaction, however great, experienced from having accomplished their pilgrimage, and being again on the homeward way, can exercise so beneficial an influence on their bodily health, that they are to such an extent less affected with disease in returning than when going. On the contrary, those who are returning, having been much longer constantly on the march, must be more worn-out, and liable to disease, than the out-goers. The reasonable conclusion in fact is, that of those who set out on pilgrimage to distant shrines, very few survive to return.

9. From the position of Baroda on the line of several much frequented roads, and the situation of the Hospital prominently in view of one of its chief entrances, sick travellers probably form a larger proportion of the in-door patients than at the generality of similar Institutions.

10. The following Table gives the aggregate total of both in-door and out-door patients, admitted and treated, with the results and proportions during the year :—

*Table Hospital No. 1.*

| YEAR 1856. — *Months.* | Old Cases remaining from previous Months. | New Cases admitted. | Total old and new Cases treated. | Average daily number treated. | Cases discharged Cured. | Cases discharged Relieved. | Ratio per Cent. of Cured to Admitted. | Deaths. |
|---|---|---|---|---|---|---|---|---|
| January ... ... .. | 96 | 232 | 328 | 84·79 | 45 | 203 | 19·39 | 1 |
| February ... ... .. | 79 | 196 | 275 | 91·53 | 32 | 162 | 16 32 | 1 |
| March ... ... ... ... | 80 | 242 | 322 | 83·15 | 88 | 148 | 36·36 | 4 |
| April ... ... ... .. | 82 | 226 | 308 | 85·5 | 103 | 124 | 45·57 | 1 |
| May ... ... ... ... | 80 | 155 | 235 | 73·6 | 86 | 72 | 55·46 | 1 |
| June ... ... ... ... | 76 | 135 | 211 | 64·5 | 72 | 71 | 53·33 | 4 |
| July ... ... ... ... | 64 | 111 | 175 | 57·8 | 71 | 43 | 63·96 | 4 |
| August ... ... ... ... | 57 | 132 | 189 | 62·0 | 64 | 52 | 48·48 | 3 |
| September ... ... ... | 70 | 132 | 202 | 78·6 | 70 | 58 | 53·03 | 6 |
| October ... ... ... ... | 68 | 145 | 213 | 72·86 | 63 | 86 | 43·44 | 4 |
| November ... ... ... | 60 | 113 | 173 | 76·4 | 45 | 43 | 39·82 | 3 |
| December ... ... ... | 82 | 149 | 231 | 71·8 | 98 | 69 | 65·77 | 4 |
| TOTAL ... ... ... | 894 | 1,968 | 2,862 | 75·22 | 837 | 1,131 | 42·53 | 36 |

11. In the Table below the final totals of the preceding Table are for comparison placed in juxta-position with the final totals of the corresponding Table for the last six months of the previous year 1855, when the Hospital was first established, the last-mentioned numbers being of course for the purpose doubled :—

*Table Hospital No. 1 A.*

| PERIODS. | Old Cases remaining under treatment from previous periods | New Cases admitted | Total old and new Cases treated. | Average daily number treated. | Cases discharged Cured. | Cases discharged Relieved. | Ratio per Cent. of Cured to Admitted. |
|---|---|---|---|---|---|---|---|
| Last six Months of 1855.. . | 0 | 978 | 978 | 51 64 | 326 | 544 | 32 31 |
| Above numbers, except Averages and Ratios, doubled for comparison with the whole Year 1856 below . .. .. .. | 0 | 1,956 | 1,956 | do. | 652 | 1,088 | do. |
| Whole Year 1856 .. .. .. .. | 96 | 1,968 | 2,074 | 75 22 | 835 | 1,129 | 42 42 |

12. What was stated in para. 3 about the patients being now much more persevering in continuing themselves under treatment, and about the greater curability of most of the cases now admitted, partly from the above cause, and partly also from their presenting themselves generally at an earlier stage of their complaints, is very distinctly seen from the 5th and 8th columns of the above Table No. 1 A, where, with a small increase in the actual rate of admission, the average number daily Treated was 23 58 more, and the proportion of Cures to Admissions 10·11 per cent greater in the latter than in the former period.

13. In the comparative Table above, I have not entered the number of Deaths, because, except a bare numerical comparison, no other could be attempted, such as is usually made with regard to the sickliness or healthiness of a season or place, or of the mortality from endemic or epidemic disorder, or the effects of treatment. Such could only be done,

in the present instance, by dividing the Deaths into two classes—*first*, those of which the chief cause was ordinary disease, and of which class alone there could be any comparison such as above described, and *second*, those in which want and exposure were the principal agents of death.

14. A large majority of the Deaths during the year, as will be more particularly mentioned afterwards, were from the latter causes Several persons were received into Hospital within a few hours of their dissolution, and many others, though not so far sunk, were in a hopeless state of exhaustion; but humanity forbade the refusal of admission to any, more especially as some apparently hopeless cases revived under the influence of wine and food.

15. The next Table shows, with regard to the in door patients separately, the same particulars as exhibited in the first Table, respecting both in and out-patients together —

*Table Hospital No 2, In-door Patients*

| YEAR 1856<br>—<br>*Months* | Old Cases remaining from previous Month | New Cases admitted. | Total old and new Cases treated | Average daily number treated | Discharged Cured | Discharged Relieved | Ratio per Cent of Cured to Admitted | Deaths |
|---|---|---|---|---|---|---|---|---|
| January . . | 28 | 26 | 54 | 34 09 | 7 | 14 | 26 92 | 1 |
| February | 32 | 13 | 45 | 29 5 | 14 | 2 | 107 69 | 1 |
| March ... . | 28 | 27 | 55 | 25 7 | 18 | 5 | 66 66 | 4 |
| April .. .. | 28 | 24 | 52 | 23 3 | 23 | 1 | 95 83 | 1 |
| May .. ... .. | 27 | 27 | 54 | 26 2 | 15 | 9 | 55 55 | 1 |
| June ... ... .. | 29 | 16 | 45 | 25 3 | 8 | 6 | 50 00 | 1 |
| July . . .. | 27 | 17 | 44 | 25 2 | 13 | 5 | 76 47 | 4 |
| August ... ... | 22 | 28 | 50 | 27 6 | 11 | 4 | 39 28 | 3 |
| September ... .. | 32 | 29 | 61 | 35 3 | 19 | 1 | 65 51 | 6 |
| October . | 35 | 18 | 53 | 27 8 | 17 | 4 | 94 44 | 4 |
| November .. | 28 | 29 | 57 | 33 1 | 7 | 6 | 24 13 | 3 |
| December . | 41 | 14 | 55 | 31 0 | 21 | 3 | 150 00 | 4 |
| TOTAL .. . | 357 | 268 | 625 | 28 92 | 173 | 60 | 64·55 | 36 |

16 The subjoined Table refers similarly to the out-patients separately —

*Table Hospital No. 3, Out-door Patients.*

| YEAR 1856. — *Months.* | Old Cases remaining from previous Months | New Cases admitted. | Total old and new Cases treated. | Average daily number treated. | Discharged Cured | Discharged Relieved. | Ratio per Cent. of Cured to Admitted. | Deaths. |
|---|---|---|---|---|---|---|---|---|
| January .. .. | 68 | 206 | 274 | 50 7 | 38 | 189 | 18 44 | 0 |
| February .. | 47 | 183 | 230 | 62 03 | 18 | 160 | 9 83 | 0 |
| March .. . | 52 | 215 | 267 | 58 8 | 70 | 113 | 32 55 | 0 |
| April | 54 | 202 | 256 | 62 2 | 80 | 123 | 39 60 | 0 |
| May . . | 53 | 128 | 181 | 47 1 | 71 | 63 | 55·46 | 0 |
| June . .. | 47 | 119 | 166 | 39 2 | 64 | 65 | 53 77 | 0 |
| July . . . | 37 | 94 | 131 | 32 6 | 58 | 38 | 61 70 | 0 |
| August . | 35 | 104 | 139 | 31 4 | 55 | 46 | 52 87 | 0 |
| September | 38 | 103 | 141 | 43 3 | 51 | 57 | 49 51 | 0 |
| October | 33 | 127 | 160 | 45 06 | 46 | 82 | 36 22 | 0 |
| November . . | 32 | 84 | 116 | 43 3 | 38 | 37 | 45 23 | 0 |
| December .. | 41 | 135 | 176 | 37 8 | 77 | 66 | 57 03 | 0 |
| TOTAL | 537 | 1,700 | 2,237 | 46 39 | 666 | 1,069 | 39 17 | 0 |

17 The larger proportion of cures registered among the *in*-patients than among the *out*-patients, which was referred to in my last Report, with the supposed explanation, is again apparent in the two last Tables.

18 The following Table shows the admissions of various classes of disease during each month of the year. From it will be seen that the diseases furnishing the chief number of patients were, in the order of their frequency, Periodic Fevers, Skin Diseases, Diseases of Stomach and Bowels, Diseases of Generative Organs, and Diseases of Organs of Respiration. There were no cases of Eruptive Fevers and only three of Cholera, two of which proved fatal.

*Table Hospital No. 4, In-door and Out-door Patients together.*

| Year 1856. — Months. | Periodic Fevers. | Eruptive Fevers. | Diseases of Brain and Nervous System. | Ditto of Eye and Appendages. | Ditto of Ear and Nose | Ditto of Mouth and Fauces. | Ditto of Organs of Respiration | Ditto of Organs of Circulation. | Ditto of Stomach and Bowels. | Ditto of Liver. | Ditto of Spleen. | Ditto of Organs of Urination | Ditto of Organs of Generation. | Ditto of Rectum and Anus. | Ditto of Skin. | Ditto of Bones and Joints. | Injuries. | Cholera. | Other Diseases. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| January .. . | 28 | 0 | 9 | 8 | 11 | 5 | 26 | 1 | 32 | 0 | 2 | 2 | 10 | 5 | 24 | 3 | 0 | 0 | 66 | 232 |
| February .. .. | 14 | 0 | 8 | 6 | 3 | 0 | 13 | 0 | 25 | 0 | 2 | 0 | 21 | 6 | 40 | 4 | 0 | 0 | 54 | 196 |
| March .. .. .. | 36 | 0 | 3 | 9 | 10 | 1 | 16 | 2 | 29 | 0 | 8 | 4 | 17 | 2 | 18 | 4 | 1 | 0 | 82 | 242 |
| April .. .. .. | 24 | 0 | 7 | 4 | 12 | 0 | 11 | 1 | 24 | 0 | 3 | 0 | 20 | 3 | 28 | 3 | 3 | 1 | 82 | 226 |
| May .. .. .. | 23 | 0 | 1 | 0 | 1 | 0 | 10 | 0 | 18 | 0 | 0 | 0 | 13 | 3 | 10 | 0 | 0 | 0 | 76 | 155 |
| June .. .. | 10 | 0 | 3 | 1 | 10 | 2 | 5 | 1 | 13 | 0 | 2 | 2 | 16 | 4 | 20 | 2 | 1 | 2 | 41 | 135 |
| July .. .. .. | 12 | 0 | 1 | 2 | 9 | 0 | 2 | 0 | 20 | 0 | 0 | 1 | 18 | 0 | 12 | 0 | 0 | 0 | 34 | 111 |
| August .. .. | 15 | 0 | 7 | 0 | 5 | 0 | 8 | 0 | 17 | 0 | 6 | 1 | 14 | 1 | 18 | 0 | 0 | 0 | 40 | 132 |
| September .. .. | 23 | 0 | 3 | 1 | 6 | 1 | 12 | 0 | 9 | 0 | 1 | 0 | 16 | 3 | 16 | 4 | 0 | 0 | 37 | 132 |
| October .. .. | 31 | 0 | 2 | 2 | 8 | 0 | 7 | 0 | 4 | 0 | 2 | 0 | 16 | 0 | 21 | 1 | 0 | 0 | 51 | 146 |
| November .. .. | 13 | 0 | 3 | 5 | 4 | 0 | 9 | 0 | 7 | 0 | 5 | 0 | 11 | 0 | 9 | 1 | 0 | 0 | 46 | 113 |
| December .. .. | 16 | 0 | 4 | 6 | 7 | 1 | 14 | 0 | 11 | 0 | 3 | 0 | 20 | 0 | 27 | 1 | 0 | 0 | 39 | 149 |
| Total .. . | 245 | 0 | 51 | 44 | 86 | 10 | 133 | 5 | 209 | 0 | 34 | 10 | 192 | 27 | 243 | 23 | 5 | 3 | 648 | 1,968 |

19. Of the thirty-six cases of death in Hospital within the year, twenty-seven were on admission in a state of exhaustion chiefly from exposure and want. Beyond this some had evident disease and some had not; the diseases being mostly Fever, Diarrhœa, Dysentery, Rheumatism, Scurvy, and Chronic Abscesses and Ulcers. A few died on the day of their admission and others lingered a little longer.

Of the remaining nine the causes of death were as follows:—

*Table Hospital No. 5, In-door Patients.*

| Number. | Year 1856. Month in which Death occurred. | Patient. | Cause of Death. |
|---|---|---|---|
| 1 | January ... ... | Brahman ... ... | Disease of Heart. |
| ... | February. | | |
| ... | March. | | |
| 2 | April ... ... ... | Mussulman ... ... | Cholera. |
| 3 | May ... ... ... | Hindoo Byragee ... | Chronic Abscess. |
| 4 | June ... ... ... | Mussulman ... ... | Cholera. |
| 5 | July ... ... ... | Hindoo ... ... ... | Abscess. |
| 6 | July ... ... ... | Ditto ... ... ... | Chronic Dysentery. |
| 7 | August ... ... ... | Portuguese .. ... | Disease of Liver. |
| 8 | September ... ... | Hindoo ... ... ... | Abscess. |
| 9 | October ... ... | Hindoo, very old... | Gangrene. |
| ... | November. | | |
| ... | December. | | |

20 The following Table shows the numbers according to Caste, Age, and Sex admitted —

*Table Hospital No 6*

| | Hindoo | Mussulman | Others | Males | Females | Adults | Children | Total of all Castes, Sexes, and Ages |
|---|---|---|---|---|---|---|---|---|
| In door admitted | 194 | 56 | 18 | 238 | 30 | 259 | 9 | 268 |
| Out door admitted | 1 516 | 177 | 7 | 1,172 | 528 | 1 382 | 318 | 1 700 |
| Total admitted both In-door and Out door | 1 710 | 233 | 25 | 1,410 | 558 | 1,641 | 327 | 1,968 |

21 A great number of all the minor Surgical Operations were performed during the year, but of the larger ones, only a few, for the removal of large fibrous tumours

22 One interesting case of Tetanus from contused wound of the scalp, which, just before the administration of the *Extract of Cannabis Indica,* or *Indian Hemp,* seemed about to terminate fatally, recovered under gradually increased and very large doses of that medicine, which exerted a most marked influence over the disease

23 A boy dying of hemorrhage from a lacerated wound of the scalp, which wound, from applications previous to admission, was in a sloughing state, and the bleeding from which resisted every thing else tried, was at last saved by the use of needles and twisted sutures, which effectually restrained the flow of blood

24 One of the most prevalent and distressing diseases among the poorer classes, and one that has not been permanently benefitted by any

thing I have tried, is the Indian Leprosy, Anasthetic and Tubercular. It is curious that, of the cases of Leprosy that presented themselves at Hospital, nearly all were males, and a remarkably small proportion of females.

25. I have latterly tried to bring into use in the Hospital such native medicines as are efficient and procurable here. In many cases of mild fever, I have used with satisfactory results the *Extract of Berberies* or *Barberey*, called here *Rāswānti* or *Rāsānjān*, and on the Bengal side *Rāsōt.* I am at present trying the root of the *Aconitum Heterophyllum*, here called *Atīvīs*, and which is I suppose the same as on the Bengal side is, probably by contraction, called *Atees*, of which trials in the treatment of fever are there now being made.

26. The assent obtained by you from the Durbar to the three recommendations at the close of my last Report, namely, for building a house for the Native Doctor, partitioning off a portion of the Main Ward of the Hospital for females, and entertaining a Nurse or Matron for the more proper management and treatment of the female patients, has been, and will continue to be, productive of very great convenience and advantage.

27. With regard to the Hospital Buildings, I have this year only to request that the sloping boards of the ventilators on the ridge of the roof, may be made a little broader than they are at present, as the rain in the monsoon, whenever there is much wind, dashes in between them, rendering the interior of the Hospital damp and uncomfortable. An increased breadth or greater slope in the boards would prevent this.

28. The Hospital Buildings, which are large and valuable, will be best preserved in good order, and ultimately with greatest economy, if some of His Highness' head workmen, a builder, carpenter, and tile-layer, be ordered regularly, in the beginning of the hot weather of each year, to examine thoroughly every part, walls and roof, and to repair, before the monsoon, any thing which may be found imperfect.

29. In addition to the warm interest you have personally always taken in the Hospital and its sister Institution, the Vaccine Establishment, I must beg permission respectfully to thank you on behalf of the Hospital, for the gift of Company's Rupees 200, which, when I mentioned to you my wish to procure a Skeleton for it, you handed to

me for the purpose. Subsequently, as you are aware, instead of having to order one from Britain at a high price, I found I could procure one from the Grant Medical College, Bombay, for the moderate sum of Rupees 20. Indeed, I have thence procured, for that amount, both an articulated and an unarticulated Skeleton. In thus doubly supplying what I had wished for the Hospital, and still leaving a large balance, which you desired me to expend in any way I thought best for that Institution, the good fortune of your gift was, however, not yet ended, for at a sale lately, I had an opportunity of purchasing a very good Microscope by Griffin, of a linear magnifying power of about 400°, which number being squared gives 160,000 as its superficial enlarging power, the more popular way of describing the magnifying effect. With this power, although not quite so high as might be wished, the globules of human blood may be examined, and all ordinary Medical purposes served. The instrument is in good order, worth at least £10 in Britain, and at the ordinary rate of selling these things in this country, worth here double that, or Rupees 200. I purchased it for forty-two Syacye, equal to about Company's Rupees 37. The balance still in my hand, I purpose devoting to the purchase, as opportunity offers, at reasonable rates, of Medical books most suited for a Native Hospital, and which may form the nucleus of a little Hospital Library. The Hospital, which, with its dependent buildings, is probably the most commodious Provincial Native Hospital in Western India, will thus, through your gift, have become supplied with what as yet, so far as I am aware, no other similar Provincial Institution possesses, namely, a small Medical Library, a Microscope, and a couple of Skeletons.

30. There are two matters on which I take the liberty respectfully to make the following observations. They both relate to the extension of medical aid to the sick poor of Baroda. As the Durbar supports on a liberal scale the present Hospital and Vaccine Establishments, the funds which, of course, would be necessary, should more reasonably perhaps be raised, if possible, by subscriptions among the rich Bankers, Merchants, and other wealthy inhabitants of Baroda, who, at present, bestow probably quite as much as would be necessary in individual, desultory, and caste charities. Sooner or later, doubtless, both measures will be carried into execution, but the time will I suppose be when these inhabitants

can be induced to act together, and do for sick human beings what some of them long ere now, by supporting a *Pinjrapole*, have done in Baroda for diseased animals, namely, build and support a Leper Hospital in the suburbs and a Dispensary in the Southern quarter of the City.

31. Indian Leprosy is strongly suspected of being contagious, and its cure is not yet known. It is not desirable, therefore, to have Lepers in the same Hospital with others coming into contact with them, and having beds, &c. interchanged. This is, however, unavoidable at present, for while there is no other place to which to direct them, it would be difficult to refuse them admission, especially as many Lepers, if so denied entrance, would merely lie down and die at the Hospital door. It need not be feared that the building intended for their treatment would, from the constant admissions, and the few discharges of patients owing to the incurability of their disease, require to be of impracticable dimensions, or would entail extraordinary expenditure. It would probably do neither, because the patients would not be kept like prisoners, but would be allowed freely to leave Hospital whenever able or willing, and very few, except those in the last and most helpless stages, would desire to remain unreasonably long in one place—an Hospital. Thus, though probably there would be few or none dismissed cured, still there would be a constant efflux of persons relieved or discharged at their own request, and there would not be any one time an inconvenient accumulation of patients requiring more accommodation and support than could be afforded. The comparative effect of various remedies, so desirable of ascertainment, would be much more satisfactorily tested in an Institution solely devoted to that disease, than in any other where observations can at best be but much more desultory, and where the attention is apt to be attracted to other diseases more curable and less disagreeable. Leprosy being, as before said, very common at Baroda, it will I think appear that, if the funds could be procured, such an Institution would be most desirable.

32. A Dispensary in the Southern quarter of the Town of Baroda, the part farthest away from the present Hospital, would meet the medical wants of a large portion of the sick poor. I refer to daily servants, laborers, workmen, and many tradesmen residing in the farther half of this large City, many of whom doubtless would attend at

a Dispensary in their own neighborhood much more frequently and regularly than they can come to the Hospital at this side of the Town. Indeed, a laboring man, living in the distant quarter of the City, would have his day quite broken up for work by so coming. Many women and children in the distant quarters, who cannot spare time from their household duties, except in cases of urgent necessity from extreme illness, to come to the Hospital, would attend such a Dispensary. Doubtless, also, many persons unwilling to become in-patients of the Hospital, who are too weak to walk daily there, and too poor to afford a conveyance, would resort to a Dispensary within reach of their feeble powers of locomotion. A Dispensary in the other side of the Town, a little beyond its centre, would serve to relieve and cure all the slighter cases of illness there, while it would doubtless prove a feeder to the Hospital, by transmitting thither, for in-door treatment, all the severer cases. Nor would there be any danger of the out-door or Dispensary practice of the latter being diminished, for in a City like Baroda, with a lakh or more inhabitants, there is ample room for a large Hospital and Dispensary in one quarter and a small Dispensary in another.

33. In addition to the usual Civil Hospital, there is I believe at Rajkote a Leper Hospital, and at Poonah and Indore a Dispensary.

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## VACCINATION.

34. I have now to report on the Vaccine Establishment during the last six months of the year 1856, having previously, of date 22nd July 1856, submitted to you, according to your instructions, an account of that department for the former half of the year.

35. During the period under report, the Establishment was in process of being raised from its former strength of ten Vaccinators to sixteen, the number next sanctioned; and which last-mentioned number it would have attained previous to the expiry of the year, had it not been for the necessary discharge of one Vaccinator, and the suspension of another; so that the highest strength to which the Establishments during the period attained was only fifteen. From the beginning, however, of the present year 1857, although of course such does not appear in this

Report, the full number of sixteen has been employed. The progressive strength of the Establishment will be seen in the following Table:—

*Table Vaccine, No. 1,*

*Showing the Strength of His Highness the Guicowar's Vaccine Establishment for the Half-year ending with December* 1856.

| YEAR. | MONTHS. | Number of Vaccinators employed. | REMARKS. |
|---|---|---|---|
| Latter half of 1856. | July ... | 10 | Two of these Vaccinators new men. |
| | August ... | 13 | Other three new Vaccinators. |
| | September.. | 14 | One other new Vaccinator. |
| | October ... | 14 | |
| | November.. | 15 | One Vaccinator discharged in middle of month, one new Vaccinator entertained from beginning of month, and a second in the latter half of month. |
| | December... | 15 | One man suspended in middle of month, and one new man entertained in latter half of month. |
| TOTAL ... | | 81 | |
| AVERAGE ... | | 13·5 | |

36. The next Table shows the amount of Vaccination in the same period:—

*Table Vaccine, No. 2.*

*Abstract of Vaccination during the latter half of the Year* 1856.

| Year. | Months. | Total vaccinated | Not seen after Vaccination. | Vaccinated twice, but failed both times. | Total successful. | Number of Vaccinators. | Average number vaccinated by each. | Remarks. |
|---|---|---|---|---|---|---|---|---|
| Latter half of 1856. | July ... | 1,072 | 88 | 142 | 842 | 10 | 107·2 | |
| | August ... | 1,170 | 145 | 134 | 891 | 13 | 90·0 | |
| | September | 1,399 | 155 | 141 | 1,103 | 14 | 99·9 | |
| | October ... | 1,283 | 169 | 141 | 973 | 14 | 91·6 | |
| | November | 1,183 | 129 | 119 | 935 | 15 | 78·8 | In November several Vaccinators were sent to distant Districts, in going to which great part of the month was occupied. |
| | December | 1,557 | 154 | 214 | 1,189 | 15 | 103·8 | |
| | | | | | | 81 | 567·7 | In 6 months. |
| Total ... | | 7,664 | 840 | 891 | 5,933 | 13·5 | 94·6 | In 1 month. |

Total vaccinated in the half-year ... ... 7,664
Of these were Male ... ... ... 4,548
„ „ „ Female ... ... 3,416
———— 7,664
„ „ „ Hindoo ... ... ... 6,784
„ „ „ Mussulman ... ... ... 578
„ „ „ Other classes ... ... ... 302

Total succeeded, 5,933.

Per-centage of successful total cases, 77·5.

Average number of Vaccinators employed each month, 13·5.

Average total number vaccinated by each in six months, 567·7, equal to 1135·4 in the year.

37. By placing the more important numbers of this last summary in tabular juxta-position with those in the Report for the former half of

the same year, the state of the Department during the two periods separately, as also during the whole year collectively, will be seen.

*Table Vaccine, No.* 3.

*Comparative and Total View of the Vaccine Establishment and its operations during the two halves of* 1856.

| PERIOD 1856. | Average number of Vaccinators. | Total Vaccinated. | Total Successful. | Ratio per Cent. of Successful to Total. | Average number Vaccinated by each. |
|---|---|---|---|---|---|
| First half of 1856, as formerly reported on... | 9·6 | 6,355 | 4,854 | 74·8 | 661·9 |
| Last half of 1856 now reported on ... | 13·5 | 7,664 | 5,933 | 77·4 | 567·7 |
| Actual Total of the whole year 1856 ... | 11·5 | 14,019 | 10,787 | 76.9 | 1219.6 |

38. The strength of the Establishment in the latter half of the year being greater than in the former half, the number vaccinated was also as a matter of course greater, being 7,664 in the terminal against 6,355 in the initial portion of the year, showing an increase of 1,309 in six months. This increase, however, is not quite so great as, without explanation, would be expected from the augmented numbers at work, as will be seen in the last column of the last Table, the average of operations by each man being at last Report 661·9 in the six months and only 567·7 in the present. The explanation is chiefly to be found in the last columns of the two first Vaccine Tables, from the former of which it will be seen that fully half of the Vaccinators were perfectly new men within the last six months; and from the latter of which Tables, it will be observed that, in November—although to a less extent the same remark applies also to other months—a large number of the Vaccinators were despatched to distant Districts, varying from 50 to 150 miles away from Baroda, around which they had previously been employed. Much time, thus unavoidably lost for vaccinating purposes, was therefore consumed in the preparations for

these long marches on the journeys, and at the places themselves, until the Vaccinators got into proper working order in their new Districts.

39. The proportion of successful cases to the total number of vaccinated shows a slight advance.

40. One circumstance, not in operation during the six months embraced in my last Report, and which has tended much in several Districts to retard Vaccination, is that, in the former period, every Vaccinator was provided with an attendant Peon on the Vaccine Establishment, whose duty was to assist in collecting children. During the last six months only ten Peons having been employed, including one for the Office at Baroda, several of the Vaccinators have consequently not been furnished with regular Peons, but merely with such person as the local Village or District Authority gave for their assistance. These men were not given by the Villages willingly, or without delay, and it appears that the pay given from the Villages to the men thus posted with the Vaccinators is in some cases too small for any but a man of low caste to accept the employment. These Peons also are frequently unwilling to go with the Vaccinators away from the Villages which supply them into the other Villages around, which is intelligible when it is considered that neighbouring Villages often belong to different persons, so that the farmer of one Village, although giving, when ordered by the Durbar, a man to accompany the Vaccinator in his own Village, is naturally unwilling that this man, paid by him, should also serve in other Villages in which he has no interest.

41. In my Report to you, dated 25th April 1856, on a Vaccine Establishment for the whole of the Guicowar Territories, I myself first brought into consideration, with a view to economy, the propriety of attempting to send the Vaccinators on their duties without attendant Peons on the Establishment, thinking it possible that, in each District they visited, such temporary assistance as might be necessary would be readily given. In my second Report to you, dated 19th May 1856, I proposed, if the whole number of Vaccinators I had previously recommended as necessary should not be at once granted, that sixteen might be given for the present, and I submitted an estimate of the cost, with a full complement of Peons and one Writer. That estimate was sanctioned and is the basis on which the Establishment now rests, but I was requested, while employing more Vaccinators, to try for a time not to increase the number of Peons paid from the Department, until I should see how far the men to be given for

the purpose from the Villages should prove efficient or otherwise. On this request I have up to the present time acted, so that, as yet, the actual cost of the Establishment has not reached the last sanctioned amount of New Syacye Rupees 359-8-0.

42. The inefficiency of most of these men given locally from the Villages, in place of regular Peons furnished from the Central Establishment at Baroda, has been an almost constant source of delay, complaint, and reference; and imperfectly as they thus do what is wanted of them, as regards the assistance to be given, and the very desirable object of having the Vaccinators as little dependent as possible on the Village Authorities, they are seemingly not, without being in some cases, causes of expence to the Villages which supply them, from there not being any such standing staff of Peons, that, without hiring a new man for the purpose, one could be spared regularly to accompany the Vaccinator. It would thus probably add very little to the real expense, while it would conduce greatly to the satisfactory and smooth working of the whole Department, if a Peon could be included on the Establishment for each Vaccinator, as in the last estimate sanctioned.

43. Since the last two or three years, the plan of retaining a Peon specially to accompany each Vaccinator has been discontinued in the well-settled and uniformly managed Country of the Bombay Presidency; but it is still found necessary in the Districts under the Political Agencies neighboring the Guicowar Territory, throughout the variously managed Divisions of which I believe such assistance is, and will be, for some time to come, equally requisite.

44. In Guzerat generally, the people are so wedded to routine in every thing, that, without some show or badge of authority, scarcely any thing can be done, and more especially, *a fortiori*, almost nothing new, however beneficial, can be introduced. When a Vaccinator goes to a Village, the mere permission of the head-man to vaccinate there avails little, unless the latter, beyond a mere passive tolerance, gives also some active assistance, such as may be understood to imply, if not the order, at least the decided wish of the Sirkar. Without that, in most instances, little could be done by the unaided persuasion of the Vaccinator. In such cases, a regular Peon, furnished with belt and badge, is of great service. Without this, the people fail to recognize a Government servant, and frequently deny or conceal their children, while a man with

a *chāprās* meets every where with respect, and generally with ready acquiescence.

45. During the last half-year, I sent the Head Vaccinator, Manekhal, an experienced and honest man, several times into the neighboring Districts, to see how the new Vaccinators were doing their work. I received satisfactory accounts of the state of the lymph and the number of children really vaccinated, and I have reason to believe the reports correct. Since the beginning of the present year, the same person has been solely on this duty of inspection.

46. Some time hence, when the whole Establishment shall have become more thoroughly versed in its duties, I think it will be a good plan to give in charge of each Vaccinator a small quantity of the simpler medicines, by the careful and judicious distribution of which, not only much good might be done in the remote Districts, but also the Vaccinators and their duties would become more generally acceptable to the people. The medicines in most common request in the Districts are ointment and fever medicine, to which might be added a few purgative and emetic doses, and some diarrhœa, dysentery, and cholera remedies. With these, accompanied by plain directions, the Vaccinators could scarcely do harm, and each rainy season, when vaccinating operations, especially in some quarters, are limited, a few Vaccinators might be called into Baroda to attend the Hospital there, and learn something more particular of the use of those simple medicines. There would, indeed, be but one danger with regard to the plan, namely, that the Vaccinators might possibly be induced to neglect their chief work, Vaccination, for the above-mentioned, of merely secondary importance, tempted thereto sometimes, perhaps, by the opportunity of converting a gratuitous distribution into an under-hand profitable traffic.

47. The man discharged during the period under report was dismissed for not vaccinating low-caste people, and the other who was suspended, was so on account of stupidity in not making out his Returns correctly, according to the prescribed form.

48. His Highness the Guicowar's Vaccinators are now employed in the Central Districts around Baroda, in the Districts between the Nerbudda and Taptee, and in those beyond Ahmedabad; but the present numbers are not sufficient to extend operations to His Highness' Districts in Katiawar, or those South of the Taptee, or fully to those of now partially occupied North of Ahmedabad.

49. The Establishment having, by successive augmentations, been gradually raised to two-thirds of the full strength reported by me last year as necessary for the whole of the Guicowar Territories, and these two-thirds being now in full working order, I am prepared, as soon as I receive your instructions to that effect, to complete the Establishment, which, as before reported, and as below tabularly noted, in comparison with the present Establishment, will consist of twenty-two working Vaccinators, two Inspecting Vaccinators, one Writer, and a sufficiency of Peons.:—

| Establishment at present sanctioned. | Monthly Cost. New Syacye | | | Complete Establishment proposed. | Monthly Cost. New Syacye | | |
|---|---|---|---|---|---|---|---|
| | Rs. | A. | P. | | Rs. | A. | P. |
| 1 Inspecting Vaccinator ... | 25 | 0 | 0 | 2 Inspecting Vaccinators, each Rs. 25 ... ... | 50 | 0 | 0 |
| 1 Vaccinator ... ... ...... | 20 | 0 | 0 | 2 Vaccinators, each Rs. 20 .. | 40 | 0 | 0 |
| 10 Vaccinators, each Rs. 14... | 140 | 0 | 0 | 15 ,, ,, ,, 14... | 210 | 0 | 0 |
| 4 ,, ,, ,, 11... | 44 | 0 | 0 | 5 ,, ,, ,, 11... | 55 | 0 | 0 |
| 1 Guzerati and English Writer... ... ... ... | 25 | 0 | 0 | 1 Guzerati and English Writer... ... ... . | 25 | 0 | 0 |
| 2 Head Peons, one for Inspecting Vaccinator and one for Office at Baroda, each Rs. 6 ... .. | 12 | 0 | 0 | 3 Head Peons, one for each Inspecting Vaccinator, and one for Office at Baroda, each Rs. 6... | 18 | 0 | 0 |
| 15 Peons, one for each Vaccinator, each Rs. 5 ... | 75 | 0 | 0 | 22 Peons, one for each Vaccinator, each Rs 5 ... | 110 | 0 | 0 |
| Travelling Allowance, Rs. 15 per month, for 8 months of the year, to the Inspecting Vaccinator, equal over the whole year to Rs. 10 per month ... ... ... | 10 | 0 | 0 | Travelling Allowance of Rs. 15 per month, for 8 months of the year, to each of the 2 Inspecting Vaccinators, equal over the whole year to Rs. 10 per month each .. ... .. ... | 20 | 0 | 0 |
| Contingent Allowance for Paper and Petty Expenses to Inspecting Vaccinator ... ... | 1 | 0 | 0 | Contingent Allowance for Paper and Petty Expenses to each of 2 Inspecting Vaccinators of 1 Re. per month ... | 2 | 0 | 0 |
| Contingent Allowance to each of 15 Vaccinators, 8 annas per month | 7 | 8 | 0 | Contingent Allowance to each of 22 Vaccinators of 8 annas per month. | 11 | 0 | 0 |
| | 359 | 8 | 0 | | 541 | 0 | 0 |

New Syacye Rupees 114-9-0 equalling Company's Rupees 100-0-0

50. I believe that the full Establishment above detailed is the smallest with which it can be attempted really to maintain Vaccination in the Guicowar Territories, which are indeed of an extent that would offer sufficient field for the undivided services and attention of a European Medical Officer, solely as Superintendent of Vaccination. By the addition of such an Officer, however, the expense of the department to His Highness' Government would be really doubled ; so that if the Establishment continue to be superintended and generlly managed as at present without cost to the Durbar for its European superintendence, I beg respectfully to submit that the department taken in reference to the extent, population, and richness of the country, must be considered as very economically maintained.

51. The Officers of the Baroda Durbar continue to render most readily every assistance in their power to the Vaccinators.

52. This Report would have been submitted to you in the course of last month, January, had it not been for the non-receipt, from the distant Districts, until the end of that month, of the Vaccine Returns for December.

I have the honor to be, &c.,

(Signed) J. B. STRATTON, M. D.,

*Residency Surgeon,*

*Superintendent of H. H. the Guicowar's*

*Hospital and Vaccine Establishment.*

BARODA,
*The 27th February* 1857.

# NOTICES

ON

# KAREN NEE,

THE COUNTRY OF THE

# "KAYA," OR RED KARENS,

BY

E. O'RILEY, F. G. S.

1857.

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## GEOGRAPHICAL POSITION OF KAREN NEE.

THE Country inhabited by the race of Red Karens lies between the parallels of 0° to 20° N. Latitude and 97° to 99° E. Longitude. On its Southern extremity, it is bounded by a mountain stream, called the "Kai Mah'pee," or "Tin-producing," which drains a portion of the mountain region on its South-western side, and flows into the Salween River. To the North a small stream, the "Nau-pai," an affluent of the "Een-lay-Yeea" River, forms the boundary between it and "Levai-Loong," a mountainous tract, subject to the authority of the Mobyay (Shan) Chief. This stream, however, forms the "Een-lay-Yeea" River at a point central on the Northern frontier, from which the line Eastward diverges considerably farther Northward to the "Ba-leng" range of mountains, enclosing the "Pwoee" River and its sources, and extending to the Salween River. This latter stream on the East, and the upper course of the "Poung Loung Ngay" on the West, form well-defined lines of demarcation on both sides. From the Southern extremity, the Salween River trends in a North-easterly direction, giving an irregular and wide extended base to a cone-like shape for the whole Territory.

TOPOGRAPHICAL DESCRIPTION.

Descending upon the central portion of Karen Nee from the Western range, at a height of 6,200 feet, the lower formations present the appearance of a country of widely arched undulations of low altitude, enclosed between high ranges of mountains on its Southern and Eastern faces, and extending in unbroken wave-like lines to the horizon Northward; while the prospect to the West is closed by the subordinate ranges of mountain lime-stone, fractured on the sides and ridges into fantastic shapes of high-walled and battlemented forts, with turrets and gigantic buttresses in a state of ruin. Reaching the springing of the undulations, it is then ascertained that they have a higher altitude than was supposed when seen from above, and that the converging lines form gently-sloping ranges of ¼ to 1½ miles in breadth. These rounded hills occupy the Southern portion, or about one-third of the whole latitudinal surface of the country, and incline with graceful curvature to the Northward, until emerged in a vast plain, which extends from that point far into the Shan States.

With my camp pitched on the top of one of the hills of medium height, I found the altitude, by the boiling point, to be 3,315 feet; and with this data the range of elevation of the undulating surface may be stated at from 3,000 to 3,650 feet above the sea level. That of the plains, as an average, I found to be 2,850 feet. Whether this space be a raised "plateau," with declivities to the East or Northward, I had no opportunity of ascertaining beyond the defective information of the natives; and by those who had traversed the country in every direction, I was told that there was no perceptible descent from the level of the plain in either direction. Certain it is that, from an elevation of 1,200 feet above the plains, from which a range of vision with the glass was obtained of from 20 to 25 miles, no descending line could be traced; and I am therefore disposed to conclude that, from the point of the great rapids on the Salween River, a gradual rise of the surface occurs, which continues with varying lines of altitude from 2,500 to 4,000 feet through the Shan States to the North-eastern spurs of the Himalaya. Some idea of the picturesque beauty of the scenery may be formed from the fact that, neither on the more distant ranges of hills, nor on those of the lower country, is any continuous forest-jungle seen: all, with the exception of

lines in the steep gorges of the water-courses, having given place to a careful cultivation of the soil for upland cereals, to meet the wants of man: nor is there an absence of vegetation of larger growth to vary the landscape. Then, where the numerous villages mark the homes of the natives, the graceful foliage of the gigantic bamboo, associated with the banian and cotton-tree, afford a rich variety of shade in relief on the bright red color of the soil; the more distant chain of mountains to the Eastward of the Salween River, with their tops enveloped in clouds; the nearer limestone-hills seen through a dim blue haze in rugged outline; the vast plain beneath, shining with all the golden hues of autumn; and the park-like appearance of numerous enclosures with herds of cattle grazing near the water-courses—all combine to form a picture of surpassing magnificence and homelike tranquil beauty.

In the hilly or upper central portion of the country, no running streams exist of any consequence, the want of the natives being supplied by small runlets, found in the steepest declivities of the undulations.

### GEOLOGICAL AND MINERALOGICAL CHARACTER.

Tracing the series of formations from the anticlinal axis of upheavement at a distance of 18 miles to the Westward, where, at a height of 7,250 feet, the schists and gneiss of the "Silurian" system appear in a highly disrupted state, the limestone of this locality would agree with that of the "Devonian," alternating with the sandstones of that system. It differs from the usual character of the mountain limestone both in color and density, but, like it, has a tendency to form circular cells on the surface in the process of "weathering." In outward appearance it has an uniform grey color, is extremely hard and compact, and fractures in splintery fragments; internally its color varies from a dullish slaty and drab, to a fresh tint profusely intersected by thin veins of white and red; and occasionally, thick veins of the crystallized carbonata, white and slightly translucent, permeate the mass. It is, in general character, a marble of great density, adapted for all useful and ornamental purposes.

The ranges of this rock have a very uniform parallel direction E. S. E. and W. N. W., and occur over a longitudinal space of about 35 miles,

unmixed with other formations above the surface ; but in the fissures, and spread at the bottom levels of the undulating hills, fragments of a hard quartzose sandstone are found, highly impregnated with oxide of iron to an extent that constitutes it an ore of that metal.

Enclosed between piles of limestone ranges, whose rugged lineaments and mural bases afford a striking contrast to the central or undulating portion of the country, the difference in this respect might suggest a difference in the nature of the formation. Such, however, is not the case, as is seen on the surface of the latter, where blocks of all sizes of the same rock protrude, caused by the wastage of the surface during many generations of cultivation. It is, therefore, evident that the action of upheavement which formed the ranges as they now exist, was less violent in the central space, leaving a swelling ocean wave-like form of the surface, instead of the more disrupted disturbances of the former masses.

Of its mineral character I am not in a position to speak so confidently ; knowledge of this nature requires time and research to attain, when unaided by an acquaintance with such deposits on the part of the natives themselves. At the Southern extremity of the country, however, the Tin deposits of the "Khai-ma-H'pee" stream have been long known and worked by the resident Karens there ; the granite, in which the Tin "lodes" occur, displaces the limestone ; and from the same locality, I obtained specimens of a green carbonate ore of copper, giving evidence of the presence of that metal also. Those with the iron ore previously noticed are the only varieties of ores that have, as yet, come under my notice.

## AREA, DIVISION, AND POPULATION.

*Area.*—In the computation of the area of a country so little known as Karen Nee, considerable dependence must necessarily be placed on the information obtained from the natives, whose estimate of distance is as various as it is rude. Thus, some compute by the number of pipes of tobacco consumed, others by the number of halts for rest during the journey. Actual measurement they know not, hence all such "data" must be defective. With every care, however, to ensure some degree of correctness, I have come to the conclusion, that 80′ of Latitude by

95′ of Longitude, or a superficies of 7,200 *square miles*, will represent, as an approximation, the total area of the country occupied by the Red Karen race.

*Division.*—As at present obtains, the country is divided into two portions, or the East and West Karens; the former, under three Chiefs, occupying three-fourths, and the latter, belonging to the two Chiefs, Kyay-h'pos, about one-fourth of the whole. The line of demarcation, however, is very irregularly defined, and affords a prolific source of dispute and contention between the respective Chiefs and their partisans.

*Population.*—In the Western portion of the country, 92 Villages acknowledge the two Kyay-h'pos as their Chiefs. These Villages contain 7,360 houses, and giving five souls to a family, which I am assured by the head-men is below the average, we have a population in the Western portion of 36,800 souls.

On the Eastern side, the Villages are much larger, more continuous and more densely populated than those on the West, and from "Kyan Pu Tie's" own statement I had it, that his portion, in which reside the Chiefs "Koon Tsi," "Pya Ten," and "Pa Bansalay," contained upwards of 1,200 Villages, or 36,000 houses, which, at the former average of five souls to a family, gives ... ... ... ... ... 180,000

On the West, as above ... ... ... ... 36,800

Making a total of the Population for the whole country, of which one-third are slaves, at about 28 *souls to the square mile* ... ... ... ... ... ... 216,800

And from the evidences presented on the face of the country, in the numerous sites of Villages, and the all-pervading cultivation which covers the surface, I am disposed to regard the amount shown as representing the maximum of the Population, the proportion belonging to or rather claimed by the Chief "Kyay-h'po" being about one-fifth of the whole.

## CLIMATE

As my experience of the climate was confined to so short a period as the better part of a month, I am only enabled to speak from actual observation of the number of days of residence, and that, during the season of the year when the temperature is at the lowest range—thus,

the daily indications of the Thermometer gave a range, for the higher elevations, of 55° *to* 70°, and for that of the plain at "Noung Belai" 48° *to* 76°, the lower temperature of the latter being caused by the vicinity of water, a greater degree of moisture in the atmosphere, and consequent excess of daily evaporation. The mean average for the uplands may, however, be placed at 62°, and that of the plain at 66° for the month. During two days of cloudy weather attended with rain, the range from 52° did not reach 60°, and the feeling of chillness was intense.

As regards the remaining portion of the year, I note from the information of the agent, that, although the temperature in the morning and evening is not so cold as at present, it is sufficiently so to render the use of a blanket necessary, and especially so during the rains; also that there is no portion of the year when the heat is oppressive, similar to that felt in Toungoo or the large River Valleys.

As regards the rains, they appear to set in at irregular periods, but are generally established by the middle of June, and continue till the end of October. The showers are described as being more partial and less copious than those of the lower regions of the "Sitang," which is doubtless owing, in a great measure, to the position of the country, sheltered by high ranges of mountains on its West side, on which the surcharged rain-clouds of the S. W. Monsoon lose the excess of moisture in their passage across the tropics.

Of the exceeding salubrity of the climate there can be no doubt; where neither fogs nor miasmatic vapours prevail, and no dense jungle exists to taint the pure air with its noxious exhalations from the decomposition of its "humours," the conclusion is easily made without the corroborative testimony of statistical returns; I shall, therefore, merely repeat the words of the "Shan Poogye," for several years a resident at the Chief's Village, to the effect that, with the exception of those who die from the effects of small-pox and measles, the adults die generally from old age; that fevers and other diseases of the plains are rare, and when occurring, are to be attributed to the excessive indulgence in the universal fermented liquor ("Koung Yai"); that children are reared with little care, and the deaths of infants very few; and finally, as stated by the old Chief himself, who declares his age to be upwards of ninety, that dreadful scourge the *cholera* has *never visited this highly favored region.*

## THE FAUNA AND FLORA.

*Domestic Animals.*—As these remarks are not intended as a scientific exposition of the natural history of the country, I have merely to state briefly such general character of the *animals and vegetable life* which came under my observation, as would indicate a marked difference of climate from that of the lower region; and first, of *domestic animals*, adapted to the wants of man. *Black Cattle* abound in every village. No care appears to be taken *of them*. The females and young are permitted to roam at large over the vast plains and upland cultivations when in fallow. The males are generally castrated soon after the birth, and at the proper age are trained to the use of the pack-saddle and plough; so that each householder possesses from one to three or more bullocks, with which he carries or drags all the material for his household and other requrements. *Buffaloes* of a large size would appear to be numerous on the Northern portion of the country, where, from its level surface, their use is more adapted; and of both *Black Cattle* and *Buffaloes*, numerous herds, chiefly of the former, are seen, to the number of several thousand heads, grazing in all directions, and all in capital condition.

The next most serviceable animal to the Red Karen is the "Pony." In common with the herds of cattle, they are allowed to breed and roam at large, until of a sufficient age to be broken to the saddle. No care whatever appears to be taken of them, and they are consequently ragged and inferior-looking beasts, but hardy to a degree; and no man of any consequence is without one upon which, at an ambling pace, with numerous small bells suspended on the throat-strap of the bridle, and armed with a spear or matchlock, he performs a journey of 15 or 20 miles with celerity and ease.

Pigs and Goats are also numerous; the former of the Chinese breed, with low flanks and short stout limbs. They are also permitted to seek their food in the open country, and return in the evening to a peculiar call of the villagers. The *Goats* (the Wild Goat is found in the hilly tracts) are exceedingly fine animals, and appear to derive a most nourishing food from the short sweet grass of the "downs." Certainly those which I purchased for food were in appearance and flavor equal to gram-fed mutton.

The common Fowl is universally reared, and is consequently plentiful; but it would appear that the purpose to which it is applied is not so much an item of food as that of providing a means of augury from the bone, a process hereafter described, and therefore forming a portion of the superstitious observances of their Spirit-worship, in which *Pigs, Fowls,* and *Dogs* form the usual sacrifices and are eaten by the worshippers.

*Wild Animals.*—Of wild carnivorous animals, the Leopard of the larger kind, which sometimes attacks the cattle, and the smaller animals of that class, are the only ones found in the country; and these, owing, I presume, to the absence of a jungle, of which the whole surface has been long since denuded, are not common.

The Gye or Muntezak and the "Tsat" are occasionally met with on the skirts of the low hills, but the absence of cover is against their becoming more abundant in the central country. Of *Game,* I am enabled to state, from my own observation, that a small white-bellied "Hare," the spotted and the brown-backed "Pheasant," and the red-legged "Partridge" are common; the Hare and the Partridge more especially so; the call of the latter being heard in all directions in the morning and evening, and rising in short flights from the stubble on being disturbed.

When at "Naung Belai," close to a large sheet of water, I observed of Water-fowl the "Ash-colored Heron," the "Plumed Stork," the "Egret," the small grey and the large "Spotted Duck," and a variety of the "Wade class," which I had not previously seen; and on crossing the plain to "Ngwai Toung," the "Golden Plover," the "Jack," and "Painted Snipe" sprung up from the passage of the Elephants in the wet soil near the water-courses.

*Vegetation.*—Of those types of vegetation which were new to me, I made a small collection, chiefly of shrubs and creepers, amongst which will be found specimens of the wild "Raspberry" and Strawberry; two kinds of Fir (Pines), and plants of Creeping Pines, the flower of which possesses a delicate and pleasant fragrance, and I think would be considered a great acquisition by the Floricultural Botanist.

Of Ferns, Orchids, and Mosses, the country is comparatively bare, the atmosphere not being sufficiently humid to encourage their growth. I was only enabled to collect one specimen of the former, in appearance

and habit like the Field Fern of Europe; and of "Orchids," the few collected differ considerably in character from those of the lower jungles.

## HISTORY OF THE RACE OF "KAYA" OR RED KARENS.

An insuperable difficulty presents itself in tracing, with any degree of correctness, the origin of a barbarous race of people, who possess no written character, and whose history is clothed in the obscurity of legendary tradition, handed down to successive generations by oral agency alone, in which much of the fabulous becomes mixed with certain transactions of a nature to note indefinitely the "era" of their occurrence, but affording no positive source from whence to derive any thing approaching to correct "data." It is thus with the race of the "*Kaya*," so called by themselves in their own language; that of "Karen Nee" or "Red Karens" being given to them by the Burmese and surrounding people, from the predominating color of their costume, the short-drawers and turban being generally of that color, which distinguishes them from the other tribes of "Karens," whose attire consists of a white tunic, and who are on that account termed "Karen Pyee" or "White Karens."

The source of the present information is the old Chief "Kyay-h'po-Gyee," whose extreme age and impaired faculties render it necessary to curtail and make much allowance for the discursive process of the recital, and the improbable and supernatural events which garnished it.

As far back as tradition reaches, it would appear that the original country of the "Kaya" was "Pagan" on the Irrawaddy, from whence, together with a number of Kullahs (of what race is not stated), and Taroks or Chinese, they were driven by the Burmese. Of the probable date of this occurrence no information could be obtained. From "Pagan" they proceeded to the mountains of "Nat-h'toik" in a S. W. direction from "Ameerapoora," where they remained for only a few months, or sufficient time to allow them to plant and reap the crop. From this place they were again driven by the Burmese, when they separated, the Chinese proceeding to their own country, the Kullahs in a Northern direction, and the "Kayas," or "Red Karens," to "Po Myoung Yuay," in the Shan Territory East of the Salween, where they remained only for a short period, and were again attacked and driven forth by the

Burmese to the Western ranges of the Mobyay Province, from which locality they were expelled by their old enemies, the Burmese, after a residence of a few years. At this period the race had become numerous, and had been augmented by the addition of numbers of Karens from the Western ranges. Being again compelled to seek a place of residence further to the South, they attacked and drove out the Shans, who occupied the Northern portion of the country ("Karen Nee"), and established themselves at a place called "Tahoom," to the Eastward of "Nyoung Belai," from which point, as they increased in numbers, the higher lands of "Kyay-latsek," the residence of the present Chief "Kyay-h'po-Gyee," were added to their Territory.

From the period of the arrival of the race at Tahoom to the present time, ten generations, or about 400 years, have passed away, and from that of the establishment of the Village of "Kay-la-tset," eight generations; and this bears a tincture of correctness with it, from the circumstance, that the present Chief traces his descent, and enumerates his ancestors, in a direct line, through eight successive generations, from the founder of the Village "Tso-Sha."

With regard to the history of the former Chief, (Pa Ban Meng Gyce, a man of local importance merely,) who died at an extreme old age a few years ago, the Chief "Kyay-h'po-Gyee" gave the following information:—

"Pa Ban," or Moung Hpon, was a Burman, native of the town of "Mo-tso-bo." He was a scion of the old Burman dynasty previous to "Alumpra," during whose reign he resided with the "Eing-Shay-Meng" (heir apparent) at that place, and in consequence of having seduced the daughter of that Prince, and made her his wife against the wish of the father, he, with his wife, was compelled to fly from the vicinity of royalty to Toungoo, where, being pursued by the Agents of the "Eing-Shay-Meng," he took refuge with the White Karens in the mountains East of that place. At this period, the great-grandfather of "Kyay-h'po-Gyee," by name "Lo Lya," was Chief of the Red Karens, and on being made acquainted with the circumstances attending the presence of "Moung Hpon" amongst the "Karen-h'pee," sent an invitation, offering him an asylum in Karen Nee. The Karens, however, objected to his leaving them, and he was at last compelled to make his escape furtively into "Karen Nee," assisted by emissaries sent by "Lo Lya" for that purpose. On his arrival in the country, he was given a place of residence at

"Low-Kee-Koo," a large village about 3 miles to the North of "Kyay-h'po-Gyee's" locality, where the house in which he lived still remains, being kept in repair, occasionally white-washed and used as a Spirit or Nat-house. After a few seasons, on his expressing a wish to have a place assigned him, upon which to locate his family and followers, "Lo Lya" gave him a part of the country to the Eastward, at a place called "Mein-Nway," where he resided until his death. It would appear that numbers of the Red Karens looked upon Moung Hpon as a being of superior race to themselves, from his connection with royalty, and flocked to his vicinity, regarding him as their Chief, until the number of his adherents greatly exceeded that of any other Native Chief of the country—hence his celebrity as Pa Ban Meng Gyee, the Chief of "Karen Nee," from whom the present Chiefs of the Eastern portion of the country claim descent and affinity, either as direct descendants, or by marriage with members of his family. "Kyay-h'po-Ngay," the Chief of "Noung Belai," is a descendant of a relative of "Lo Lya," the great-grandfather of "Kyay-h'po-Gyee," consequently a connection of the latter, but in what degree of consanguinity could not be explained.

Such is the crude outline of the history of the Kayas or Red Karens. Driven originally from their ancient homes by a race of greater intelligence and energy, they found a resting place in a country singularly adapted to the maintenance and increase of their kind, both as regards climate and fertility of the soil; and being defended by natural barriers on three sides of their country, they have been permitted to remain comparatively unmolested by the Burmese, Shans, and Siamese, who are but too well acquainted with the natural advantages of their position. Hence, when a Burmese Force from Toungoo invaded the Western portion of the country, about ten years since, the inhabitants, unable to cope with them, from want of fire-arms, deserted their village and fled to the mountain fastnesses of the West, where the Burmese dared not follow them; and after keeping possession of the central country for a period of three years, they were at length compelled to retreat to the Northward, with a loss of upwards of a thousand men, destroyed in the constant harassing guerilla warfare of the Red Karens, in whose hands they left the only two pieces of ordnance that formed the strength of their artillery.

That the race has occupied the country during many successive generations, is sufficiently manifest in the face of the country ; not a vestige of primeval forest exists on its surface, and the soil bears evidence of considerable wastage, as the rocks of the substratum which it originally covered have been bared by the process of its cultivation ; and that they are a distinct people from the surrounding nations of Burmese, Shans, Siamese, Chinese, and Karen Tribes, is equally apparent in their physical conformation, their habits, customs, and more especially, in the absence of all analogy, with the language of those people. The only approach to such analogy, to a degree admitting of a question of affinity, appears to exist in the language of the "Toung-thoos," who style themselves "Pa-O," with which that of the "Kayas" agrees in names of order, import, and the numerals, with the difference only of a broader dialect.

### GOVERNMENT.

The term is too comprehensive when applied to the regulation of the social relations of races who possess neither land nor dominant authority. Such is the state of the race of the "Kayas," the only semblance of authority which exists amongst them is that of the Chief or head of the tribe or community,. who is regarded simply as the Patriarch, and whose power for good or evil is nominal. In common with the other members of the community, he possesses lands tilled either by his own labor, or that of his slaves and others dependent upon him, and, in his immediate vicinity, is appealed to for the settlement of disputes, and arrangement of fines as compensation for damage or loss of life, which occasionally occur in their ceremonies of Spirit-worship and other festivals, where an unrestrained license prevails. But in general, each Village Chief exercises the same functions, assisted by elders, and their award is generally assented to by both parties.

The Chieftainship is hereditary in the family of the Chief, whose sons partake alike of the dignity of the position ; hence the numerous individuals, *soi-disant* Chiefs, who preside over small communities throughout the country, whose title is not disputed, and who assume a degree of importance in their own circle equal to that of the "Patriarch," to whom they render neither homage nor tribute. It would therefore

appear that the position of a "Chief," so called, over a large tract of country, embracing a numerous population, is the result of a combination of circumstances of anterior occurrence favorable to that position. The ancestor of several generations past may have been an ordinary member of the tribe, possessing more wealth and, consequently, greater influence than his neighbors, which a large family and long life have tended to augment; and with a succession of such favorable combination of circumstances, a corresponding degree of importance has accrued to his descendants, the eldest of whom, being regarded as the "Patriarch" or Chief of the tribe, to whom a deference is paid; but, with the exception of a few gifts of articles forming the necessities of subsistence, presented on occasions of death and other domestic occurrences, tax of any description is never paid.

That such a state of society should exist in isolated tribes and small communities would occur to us as being its natural one, but when prevailing in a large body of people, who have long lost their "nomadic" habits, and for many generations past have been settled residents of the soil, in numbers aggregating a population of a considerable Province, our surprise is excited that not a single dawning ray of the light of civilization has as yet rested upon their degraded condition, although surrounded by nations whose claims in this respect are indisputable; and if it be an "axiom," that all Civil Governments are based upon Religion, not until this present impure faith has given place to a more enlightened one, will any improvement in their social condition be effected by their own voluntary agency.

As a consequence of the absence of that protection, which an organized form of Government affords, a feeling of general insecurity pervades all classes of the community, which is considerably enhanced by the separation of interests as at present obtains in the East and West divisions of the country, under Chiefs inimical to each other. Hence arises the necessity for the use of weapons by all the male population, no individual of it being ever seen abroad without his matchlock and dagger, or several spears in his possession, as a means of defence or offence, as the opportunity offers. There exists, in fact, no restraint upon the conduct of the individual beyond that of the fear of retaliation, and each head of a family acts impulsively, acknowledging no right of control by any dominant authority.

Offences involving loss of property by theft or otherwise are expiated by an equivalent payment, failing which, the offender is detained in bonds by the owner of the lost property, and finally sold into slavery to the Zimmay Shans. Other offences against the person, even to the taking away of life, which they little regard, are commuted by pecuniary fines as the price of blood. In case of suspicion of theft, the accuser and accused have recourse to the water ordeal, in which the expense incurred is considerable, and is borne by the loser. Two pits are dug near a running stream, and being filled with water, the parties to the suit enter, and at a given signal immerse themselves, he who remains longest beneath the surface being the winner. Death occasionally occurs in these trials by the water ordeal, "the loser of his life" being considered the "winner" of the cause in such cases.

### RELIGION.

If a debased superstition, which acknowledges the power of "Spirit" (demon) influence alone, in and over action and accidents of life, can be termed a "Religion," then do the "Kayas" possess one. Unlike many tribes of Karens, who, apart from the local spirit of their worship, adore an almighty and mysterious power presiding over the world—the God of the Earth—the one and all subordinate spiritual agency—the "Kayas" have no such extended belief.

At the entrance of each village, in an open space, a small round house of rude construction is seen, raised on posts high from the ground, and near it several tall spars, to which long white streamers and bamboo basket-work ornaments are suspended—these mark the residence of the "Nat" or "Spirit" of the locality, to whom daily offerings of food and the never-failing fermented liquor "Koung Yai" are made, and who is propitiated on grand occasions with sacrifices of animals. Buffaloes, bullocks, pigs, goats, fowls, and dogs are offered to the Spirit, a small portion of the animal being placed within the shed, and the remainder eaten by the worshippers.

Except on occasions when the small-pox or measles prevail in the community, and the victims become numerous, the only regular festival or general assembly is an annual one, on the occasion of the renewal of the "Spirit's house" and the insignia of its character, on which occasions, I

am told, the people exhibit a recklessness of the lowest degree of barbarous license. The fermented "Koung Yai" is drunk to excess by individuals of all ages, from the infant of four years to the patriarch of eighty. Scenes of the wildest extravagance are enacted, in which the sounding of the gongs and cymbals, the deep booming of the drums, the drunken shrieking of the people, the howling of the dogs, and firing of matchlocks, combine to form a picture worthy of "Pandemonium" itself. Wounds and loss of life are not unfrequent on these occasions, and I am informed by one of the Burman Guard of the Agent who resides here, that on the last occasion of the "fête," at a village below my camp, a man and a woman were killed in these orgies.

But still more absurd, and in deeper degradation, is the practice of augury by means of fowls' bones, which they regard as the oracle of the "Nat," whence they derive signs of its approval or otherwise. No man enters upon the commonest undertaking of life, which involves an uncertainty of result, without the preliminary process of consulting the augury of the fowls' bones. He wishes to ascertain whether a piece of fallow land which he has selected for the season's cultivation will prove productive or sterile; taking with him a few articles of food, he repairs to the "Nat house," where, placing them upon the wooden altar, he invokes the Spirit to reply favorably to his inspection of the augury. Having killed a fowl and extracted the leg and wing bones, he next examines them minutely, to ascertain the number, position, and direction of the small apertures upon their surface. Into each hole he inserts a small piece of bamboo, to indicate its direction, and should they occur in certain forms considered favorable, and in accordance with his own previously conceived result, he is satisfied of the Spirit's approbation, and his mind is relieved of all care for the future of his undertaking. But it more frequently occurs that the augury is unpropitious, as the small holes in the bones vary in almost every bird: in such cases, a second and a third fowl, or more, are killed, until the desired result is attained. An instance of the extreme absurdity of this practice occurred a few nights ago, when, about midnight, the sound of two shots fired in the village alarmed my Burman Guard, who anticipated an attack by some marauders from the Eastern side. On the following day, it was ascertained that a daughter of the eldest son of the Chief was suffering from some disorder of the bowels, which a "cunning" man had told the father would be removed by firing

two shots over her body at midnight, and to ascertain the efficacy of this "prescription," he had destroyed thirteen fowls ere the signs of the augury proved favorable. In marriage, as in sickness, and in fact in all momentous events of life, this process of augury by fowls' bones is indispensable. After inspection, the bones are preserved, and I am informed that, in the Chief's house, a large bundle of such osseous remnants hang suspended, which comprise the—to him—Book of Spirit's Revelations.

Although woman would appear to be the most valuable of man's possessions with this race, as by her is performed the larger share of out-door labor, in addition to that belonging naturally to the sex, the males have but one wife, and neither in the process of betrothment, marriage, or birth, is any *religious* ceremony observed. A dowry of a certain number of pigs or bullocks, with an occasional dog thrown in as a make-weight, is that usually given to the parents of the woman, and she thenceforth becomes the property of her lord, should the augury have declared the match auspicious.

In cases of death and burial also, no religious rites would appear to be observed; the body is conveyed silently to the last resting place of the race, a patch of jungle on the summit of a hill adjacent to the village being reserved for this purpose, where it is interred with a portion of the valuables of the family, implements of household use, and a supply of food, from time to time renewed. A small miniature house is erected over the grave, in which the articles are placed for the sustenance of the Spirit during its mournful watch over the decomposition of the remains, which completed, and "the body returned to the dust that made it," the Spirit departs to the world unknown.

The following absurd legend is attached to the divinity of the fowls' bones. In ancient times, the "Karen races" worshipped an Almighty and Supreme Power, whose written law was handed down from generation to generation in the tribes, and from the absence of better material, was recorded on the skin of a buffaloe. The Chief who had it in keeping, on one occasion, before proceeding to his daily labor, left it in charge of his wife, who, neglectful of her duty, went to sleep. During her slumbers, a dog ate up the skin with its holy record, so that it was lost; but as the fowls were observed to scratch amongst the excrement of the dog, and pick out particles therefrom, they became consequently

the depositories of the lost law, and have ever since been consulted through the medium of their bones.

## CULTIVATION.

In a country whose superficies does not greatly exceed the demand for the sustenance of its inhabitants, a necessity arises for a careful culture of the soil, and this is eminently the case throughout the whole country of "Karen Nee." The implements of cultivation in general use are a Shan plough of light construction, with a broad iron shoe for the share, adapted to one animal, either bullock or buffaloe: a spade-hoe, with a long handle, for breaking up the surface of the uplands, and a small hand-hoe, in shape and size resembling a ship's scraper, for pulverizing clods and extracting weeds.

On the cessation of the periodical rains, the fallow land intended for the succeeding season's crop is broken up, either by the plough or the spade-hoe, according to position : it is then allowed to remain until January or February, when it is worked with both the large and small hoes, the clods broken up, and the trash collected, dried, and burnt. In this state it remains, until the first showers of the season have penetrated it, when it is again worked with the plough or hoe, previous to planting the grain, which is usually sown broad cast, and the sickly plants weeded out, with any weeds that spring up during the earlier stage of the crop. Some lands are transplanted ; and judging from the grain stocks of the stubble, I conclude that such have been highly prolific. The usual return from the uplands is from 15 to 25 fold, which is considered a fair crop ; the levels or wet soil of the plain, receiving an annual renovation from the deposit of rain and overflowing of the streams, are cropped annually, but those of the uplands are permitted to be fallow for three or four seasons.

The general character of the soil is that of a rich loam, of colors varying from a yellow ochre through the shades of red to a deep chocolate (but more generally the latter), with the exception of the wet lands of the lower plains, which have the same appearance and tenacity as the alluvium of the lower valleys, and with the greater care bestowed on the tillage, appear to be equally fertile.

The cereals usually planted are the red and white paddy, millet and *kyeik* ("buck-wheat"), the two last being used principally in the manufacture of the fermented liquor *Koung Yai*, which usurps the place of water as their beverage. With the preceding, the usual variety of esculents of the pumpkin tribe, beans, tobacco, sesame, and ground-nut for oil, yams and sweet potatoes, the common cotton plant, with small quantities of the dark purple sugar-cane, are found in their cultivations, from which every want of life in food, luxuries, and clothing, with the exception of salt, is derived; and this, with the universal condiments, "ngapee," "salt-fish," &c., is obtained freely from the Shan traders, who bring it from Shway-Gyeen and the Coast.

NATURAL PRODUCTIONS AND MANUFACTURES.

*Tin, Teak,* and *Stick Lac* are the articles of commercial value and importance, which are exported from "Karen Nee." The first is found as an ore, the peroxide of the metal plentifully distributed throughout the course of the stream which bears its name, "Khai-mapyee-Khyoung," on the Southern extremity of the country ; it is rudely worked by the Karens of the locality in which it is found, and sold by them to the Shan traders, who use it extensively in their own country, and take a portion to the markets of Shway-Gyeen and Maulmein. No information can be obtained of the actual quantity produced ; neither the Karens who work it, nor the traders who purchase it, paying tax upon it ; but the traders estimate their own consumption of the metal at from 10,000 to 12,000 Viss yearly. With about half that quantity as an item for that taken Coastwards, this would aggregate an amount of production equal to 17,000 Viss, at a purchase value of from Rupees 12,000 to 13,000 ; but this can only be regarded as a rough estimate, probably 50 per cent. below the actual amount of production.

*Teak* is worked by traders from Maulmein, on the banks of the streams which drain the country from the Westward. In a similar manner with the previous notice, a difficulty of obtaining information of the quantity exported on the spot is experienced. The traders pay a fee to the Chief of the "Karens" of the locality in which it is found, for the right of working the timber, and no other charge is incurred. The only approach to an estimate I could obtain was from a Shan engaged

in the trade, who said that from 3,000 to 5,000 trees were annually extracted from the streams within the Western portion of "Karen Nee."

So far as a cursory observation would admit on the line of march across the upper portions of the streams to the Southward, there still exists a very large supply of Teak, but without a proportion of growing timber to meet future demands, when the Forests become exhausted; and the circumstance that the traders are now working the upper course of the streams, affords evidence of the fact, that such process of exhaustion is rapidly advancing.

The article of *Stick Lac* being propagated in the country affords a perennial source of income to the natives who collect it. The Shan traders take from 2,500 to 3,000 bullock-loads annually to the Coast (from the Western Karens), obtained by barter with the natives for articles of clothing, dhās, and implements of cultivation, beads and other ornaments, or by purchase at a rate ranging from Rupees 8 to 10 per Viss, the load of each bullock averages 30 Viss, from which we have 90,000 Viss, or about 140 *Tons*, as the item of annual production of this article, with a relative value received by the Native Collector of Rupees 8,000.

The method of propagation is as follows. During the month of September, or at an earlier period after the cessation of the rains, the natives proceed to the ravines and other parts of the hilly country, at the base of the ranges which cannot be cultivated, where the lac insect has covered the smaller branches of the trees with the gum; after collecting which, the best specimens of the female insect, with a portion of the deposit, are selected and attached to the branches of other trees, upon which a fresh deposit is made and cropped in the usual course. It does not appear that the animal affects any particular kind of tree, as the deposit is found on the *Peepul*, the *Dzee*, "*Zizyphus Jujuba*," the *Pouk*, "*Butea frondosa*," and the *Kye* ( ? ) The three latter, however, are more generally selected, and in some instances as much as 80 *Viss* of the gum has been collected from a single tree as the production of the insect for a single season. More generally, however, from 25 *to* 30 *Viss* per tree is obtained.

The articles manufactured by the natives of "Karen Nee" may be included in the one general term of coarse articles of cotton cloth adapted for clothing, such as scarfs and the ordinary wrappers of dark

cloth used by the females for lower clothing and head-dresses. All articles of finer texture are procured from the Shans, in which may be included the red-drawers and *goung boungs* of the national costume; the last article, however, being invariably Turkey-red cloth of British manufacture. Of *Dyes* and *Drugs* the country would appear to be comparatively bare, the only dye in use being a dirty black, with which the women's clothing is discolored. This is procured from the leaves and bark of the *Dzee byu*, which are macerated and boiled; the cloth is steeped in the liquor until the requisite dirty shade is attained; it is then buried in mud for two or three days, the "*alkali*" of which acts as a mordant in giving permanency to the color. *Bees' Wax*, although apparently abundant in the hilly tracts, where the steep sides of the limestone with its numerous fissures afford a safe home to the bee, is not collected in any considerable quantity. Small quantities are occasionally obtained from the neighboring Karens, with the honey, which is used as an aid to the fermentation of their "Koung Yai" by the "Kayas." The country throughout appears to be eminently adapted to the habits of the Bee, in the security for its breeding, as before noted, and especially in the numbers of sweet-scented flowering plants which every where abound.

## REVENUE.

From what has been previously stated, it will be seen that neither tax on the land, its produce, capitation, nor in fact levy of any description, constituting a Revenue for Governmental purposes, exists in the country; so that all collections of this nature arise from the passage of traders through the country to the Southward, and this, as affects the Western portion, to which these remarks more particularly refer, has hitherto been very precarious, owing to the frequency of attacks, and the arbitrary exactions by each petty Chief upon those traders who have essayed the passage. And although an apparent willingness to conform to a more orderly line of conduct has been evinced by those individuals, in the absence of all controlling power to serve as a check on their predatory habits, some considerable time must elapse to test the sincerity of those professions, ere any large addition to the course of trade through the country is attained.

From the old Chief and his sons, I learnt that an amount of about 1,000 *Ticals* of silver was annually collected from the traders, and that sum, with presents of articles of trifling value to the extent of 250 *Ticals*, formed the whole of the receipts by the Chief "Kyay-h'po-Gyee." That received by the inferior Chiefs could not be estimated.

The usual charge upon a bullock-load of merchandise is from twelve annas to one rupee ; but no charge is made upon traders who come seeking for investments in the country, from whom presents are received in lieu of the established rate.

The Burman Superintendent of the East division of the country informed me, that the trading-road through the Western portion was known to be very greatly superior to that of his line of route, but that the fears of the Shan traders with Shway-Gyeen and Maulmein were too strong to allow of them taking that line, nor would they attempt it without a convoy sent by the Chiefs for the purpose of ensuring their security during the passage to the Salween River.

CHARACTER OF THE "KAYAS."

It is with diffidence that I offer the few brief remarks which follow on the characters of the "Kaya" race, for the reason that, being first impressions, without the experience of a prolonged acquaintance to establish their correctness, they are prone to error.

As a purely agricultural people, without the nomadic habits of their type, it would seem strange that some slight degree of civilization, inculcating the higher virtues of humanity, has not obtained in their several relations ; but I have shown, when noticing their religion, that all the qualities which distinguish man from the brute are subject to a crushing and abject superstition, that effectually bars out all the superior conditions accompanying civilization. In their homes a degree of disgusting filth prevails, approaching that of the lowest habits of savage nature. These houses in fact would appear to be a "rendezvous" for every living animal they possess—pigs, buffaloes, and black cattle, all herd promiscuously together, under and around, while the poultry and dogs mingle unmolested with the inhabitants within the house. Cleanliness, either of person or premises, is not regarded, and the stench which arises from the accumulated exuviæ of both man and brute is

sickening in the extreme Water rarely touches the surface of their bodies by their own voluntary intention, and as rarely *in its pure state* passes into them

The interchange of mutual acts of kindness would appear to be foreign to their nature help in distress is only afforded at times, which involve the loss of liberty on the part of the recipient, should he fail to restore, with a heavy interest, the assistance he received , and to this unsocial practice must be attributed the large proportion of slaves which, to the extent of one third, form a part of the population Suspicion usurps the place of charity, and honesty is a questionable virtue with them Deceit, backed by the most glaring mendacity, would appear to be an accomplishment they, in common with most Asiatic races, affect to an eminent degree. Unless under the influence of intoxication, I do not think that they are a passionate race , impulsive without reflection they certainly are, but they are for that reason less apathetic and more energetic in character than either the Burmese or other Karen tribes

Such are the traits of character which I have witnessed during my short residence amongst them One pleasing feature still remains, however, to be noticed which is the affection shown by the husband to his wife and children, but especially to the latter Where this exists, there is ample room for hope that the nature of the individual is not so debased as to be beyond the power of amelioration and that the *inculcation* of the moral principles of civilization will have the same good effect of elevating him in the social scale of the human race which it has had on myriads still more barbarous than the "Kayas"

CAPABILITIES OF THE COUNTRY

From what has been stated in the foregoing remarks, when noticing the climate, it will be admitted that the country possesses all the essentials for a "Sanatarium," so greatly desiderated for the restoration to health of the European members of the Force stationed in Burmah, to avoid the necessity for seeking it "*outre-mer*," at the large expense both to the Government and the individual which such a measure entails With a range of the Thermometer rarely below 50° or above 70° during the coldest portion of the year, and, so far as I have been able to ascertain, only a slight accession to the temperature during the rainy season—

a clear atmosphere, with sufficient moisture throughout to keep the surface in constant verdure, but not in excess—the absence of all malaria—and amongst scenery of the most picturesque beauty, in which the wild raspberry and flowering creepers of delicious odour indigenous to the soil, and where the hare, partridge, and pheasant rear their young on the hill sides—the invalid could here find a speedy means of restoration to health impaired by the hot and humid climate of the Sitang Valleys.

But any remarks on this subject must necessarily apply to a remote future, so long as the present means of access to the country are of a nature impracticable, unless under circumstances of toil and exposure of no ordinary kind. The distance by the Perambulator along the road forming my route from Toungoo was barely 85 miles, but on the Western side of the Central ranges, the road having been cut directly across the summits, involved a variation of altitude of several thousand feet each day, which might have been avoided by scarped lines round the flanks at a lower medium of altitude, and I have little doubt but that a careful survey would result in forming a line of easy gradients on both sides, to afford a means of access to all but wheel carriages; but the expense involved would necessarily be large.

Next in importance to the restoration of health is that of its preservation and sustenance, and in this respect I may fearlessly hazard the opinion, that the whole country of "Karen Nee," with its plains of 2,500 *to* 2,800 *feet*, and higher uplands of 3,500 *to* 3,800 *feet* in altitude, possesses advantages in this respect not surpassed by any Territory of British India South of the Himalaya. I have elsewhere noticed the fine condition of the cattle and their abundance, and, equally with the flocks of goats, sheep would here thrive uncared for; and potatoes, wheat, gram, and all the cereals and vegetables of useful economy find in this region a soil and climate extremely favorable to their culture. The country in our occupation would herein form the Depôt from which to draw supplies for the whole Military Force employed in Pegu.

And in pursuance of that duty inculcated by Divine precept, that all the human race may enjoy the blessings of the enlightenment of a pure faith, the country of "Karen Nee," with its numerous population, at present steeped in the lowest depths of ignorance and barbarous superstition, presents a field of operation which, on the point of humanity alone, claims our warmest sympathies and best agency to improve.

It may not be deemed irrelevant, if I here refer to a subject which has of late attracted the attention of both our own and the Dutch Government in India. I allude to the propagation of Cinchona in the Islands of Java, and the proposals for its introduction into India. Referring to past experience, the memory brings vividly before me scenes of beauty both in that Island and in the lower plateau of Peru, so greatly resembling the higher lands of "Karen Nee," both as regards climate and scenery, that I cannot refrain from the expression of my conviction, that the Cinchona would in "Karen Nee" thrive to perfection, and prove ultimately a source of incalculable advantage to our Indian Empire.

The foregoing remarks, with reference to the nature of the road *to* "Karen Nee," having been written previous to my return by a road further to the South of the one of my outward route, I am now enabled to amend those remarks by stating, that the former is far more practicable, less difficult from following the direction of the spurs on the Eastern side of the Central ranges, with a maximum altitude over the passes under 5,000 feet; and possessing other advantages over the latter, which render it adapted to become the highway of traffic and communication between "Karen Nee" and Toungoo.

## TRADE.

The trade of "Karen Nee," as at present obtains, is confined to the periodical visits of Shans from the Northward, and traders in timber from the Tenasserim Provinces. With the former a barter trade is effected; the interchange of commodities consisting, on the part of the Shans, of articles of domestic use, such as iron dhās, pans, spears, hoes, and plough-shares, with coarse articles of cotton fabric, padded jackets, short-drawers, ornamented bags, and a large supply of red and white beads, which, to the extent of six to eight pounds in weight, forms a portion of the female attire. These articles are exchanged for *Stick Lac*, which, as shown in the remarks on the natural productions of the country, is extensively propagated, and of larger productions. On the return of the Shan traders with their investments from the Coast, of salt, "nga-pee," dried and salt-fish, piece goods, iron muskets, and coarse powder—these articles are disposed of for silver, or grain, as

advances for Stick Lac deliverable on the following season's trading expedition Southward.

Any thing approaching a correct estimate of the value of this trade by the Shans it would be impossible to attain, but by taking the number of loaded bullocks as "data," which pass through the country (East and West is implied) annually, we shall have a crude estimate of the value involved. Thus reports vary from 8,000 *to* 10,000 bullock-loads of merchandise as forming the extent of the annual traffic. Assuming the lower item to be the average, with a value of Rupees 160 for the load, including Import and Export, the result shows a total value of Rupees 12,80,000, or nearly *thirteen lakhs of Rupees.*

With the Burmese from the sea-coast, who trade in timber only, merchandise forms no portion of their investments for barter. *Three Ticals per log* is the ususal rate paid to the cutters of the timber, and as this is paid upon all logs, irrespective of size, the consequence is the wholesale destruction of the timber within easy access to the water, of which I had ample evidence on my route along the course of the "Poung Loung," in which stream many thousands of fine young trees, green and of too small a size to be of value for conversion into spars, were being rafted by the Shans employed by the Burmese traders. With this timber of inferior size, however, there was much fine wood of valuable proportions; and taking the production of this stream and its numerous feeders as a criterion from which to draw an estimate of the annual value of the timber trade of "Karen Nee," it will not be much below *three lakhs* of Rupees.

The Chinese traders from Yunam, who in large numbers visit Zimmay and the Shan States to the Eastward of the Salween annually, occasionally made a detour to "Karen Nee" in former years; but this, owing to the jealousy of the Yoons, or Siamese Shans, has been prevented of late years, and the Chinese trade confined exclusively to the States of Zimmay, Laboung, and Lagoung, which are tributary to the Siamese Government.

There are many considerations that induce a well-grounded opinion of the eminent capacity of the country of the Red Karens to form an emporium of trade of the first importance. Surrounded on all sides by nations whose commercial enterprise forms the prominent feature of their character, to whom, neither mighty ranges of mountains, nor

rushing streams, oppose an insuperable barrier to the progress of trade and its attendant process of civilization, possessing within itself a numerous and comparatively wealthy population, eager to a degree to possess the products of our manufacture, and favored by nature in position and climate propitious to the development of many valuable resources which it embraces. Under our rule, and guided by our institutions, the period would not be far distant when our influence would be extended through regions hitherto closed against our knowledge and enterprise, and nowhere would it be more appreciated than on the North-eastern confines of the mighty Chinese Empire.

## SLAVERY.

In estimating the amount of population of the country, I have stated that abount one-third of the inhabitants are slaves, on which subject I deem it necessary to offer a few remarks in explanation.

The chief cause of this large amount of slavery —a term by the way only partially expressing the condition of the subject—lies in the prevalence of indebtedness throughout the community. Incurred originally by the heads of families to meet some casual expenditure attending their superstitious ceremonies, the debt, increased by an exorbitant interest, has been unliquidated at the period of the death of the borrower, and in such cases, where no effects are available for re-payment in accordance with the terms of the agreement, one or more members of the family have become bond slaves, and, unable to meet the payment from their own resources, have become permanently the property of the lender, and although bound to assist in the cultivation of their master's lands, and perform other duties of a domestic nature, they are not debarred from other pursuits from which to derive a means of eventual emancipation; but this is of rare occurrence, and the state of debtor-slavery has thus become an integral portion of their communities.

The other by far more iniquitous and remorseless state of slavery in its worst features, which prevails with this race, has its existence in their kidnapping propensities, no one single individual of which but is ready on all occasions to avail himself of the opportunity to seize the person of any of the tribes that occupy the countries in their vicinity: thus in many of the villages are seen Shans, Yaings of the Karen tribes,

"Yangalas," "Padoungs," and "Lethtas" of the North-western mountain ranges, all doomed to a hopeless state of slavery, into which, priced like beasts of burden, they are sold to the Yoons or Zimmay Shans to the number of from 2,000 to 3,000 annually.

An instance of the wholesale seizure of villages of Shans occurred a few days previous to my departure from the country. A large body of Red Karens of the Eastern division made a *dour* upon several villages of Shans situated in the border of "Karen Nee" in the District of "Eenlay Yua," and carried off the whole of the population, to the number of 360 *souls*, who were seen collected at one of the frontier "Karen Nee" villages by a Shan trader, who passed through the place and gave me the particulars of the outrage. These poor wretches, thus torn from their homes, would be separated from each other as members of a family, would be driven like cattle across the Salween, and sold to the "Yoons," to be by them re-sold to the "Siamese," and eventually end their career the slaves of a nation of slaves, no worse or more pitiable condition than which can possibly be imagined.

(Signed) E. O'RILEY,
*Deputy Commissioner.*

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# JUBBULPORE SCHOOL OF INDUSTRY.

# JUBBULPORE SCHOOL OF INDUSTRY.

No. 13 OF 1857.

FROM

MAJOR J. SLEEMAN,

*General Superintendent of Operations for the Suppression of Thuggee and Dacoity,*

TO

G. F. EDMONSTONE, ESQUIRE,

*Secretary to the Government of India, Foreign Department,*

FORT WILLIAM.

*Dated Jubbulpore, the 26th February* 1857.

SIR,

I HAVE the honor to forward, for submission to the Right Hon'ble the Governor General of India in Council, Abstract Annual Accounts of the Jubbulpore School of Industry for 1856, which I trust will be considered satisfactory.

2. The demand for the manufactures of the Institution continues to increase, and during the past year the powers of the workmen have been severely taxed to keep pace with it.

3. Appendix No. 2 shows the number and nature of the articles manufactured and disposed of during the period under review, and the Accounts exhibit a net profit of Rupees 13,552-9-9½ on the transaction of the year.

4. The rapid increase of business has demanded a corresponding increase of accommodation, and new work-shops are now in course of erection, at an estimated cost of Rupees 5,000.

5. The Overseer speaks most favorably of the conduct of the approvers and their sons employed in the Factory, and the reports received by the Government of the North-Western Provinces of the conduct of those of the latter class employed in the Police of Districts, have been so very

favorable, that the Hon'ble the Lieutenant-Governor has directed the experiment to be extended.

6. Fifteen more of the young men educated in the Schools of the Institution have accordingly been selected and dispatched to the Stations indicated; but candidates for employment as Burkundaz are no longer numerous among them, and the number was found with difficulty.

7. The rising generation has become so perfectly aware of the benefits of Education, that the boys working at looms and other occupations from 6 A. M. to 5 P. M., petitioned, some months ago, to have a Night School established in the Lines, and now regularly attend to the number of 120 from 7 to 9 o'clock, to learn to read and write Hindee and Oordoo.

8. The smaller boys, not yet employed in the Factory, attend a Day School from 9 to 12 A. M and from 2 to 4 P. M. Forty little girls attend to learn reading, writing, and knitting.

9. It would be difficult, I believe, to find a Jubbulpore Factory boy, above eight years old, unable to read and write Hindee tolerably well: many of them, from their general intelligence and quickness at accounts, have found employment as Lallas, and one boy (the son of a notorious Budhuk Dacoit leader) who is employed in the Revenue Surveyor's Office at Jubbulpore, has attracted the favorable notice of Captain Vanrenen by his peculiar talent for the higher branches of Mathematics.

10. Regarding the Experimental School of Industry established at Lahore, Captain Lawrence, Extra Assistant General Superintendent, reports most favorably:—

"The School was opened in December 1855, when the approvers (all "natives of the Punjaub and of the 'Muzzubee' and 'Choora' classes) "were set to work to learn the manufacture of Dosootee Cloth, Table "Linen, and Towels, of a similar description to those made at Jubbulpore. "These men, none of whom had previously learnt any trade, expressed "no reluctance to work: on the contrary, they readily took to the differ- "ent tasks assigned them, and under the careful tuition of skilful work- "men sent up from Jubbulpore and Meerut, they have rapidly acquired "considerable skill in the different manufactures.

"The old approvers not only worked willingly themselves, but were "anxious their sons should learn useful trades. The greater number of "the boys were, however, too young to do much, and for the first six "months, they merely attended a Reading Class morning and evening,

"and watched their fathers at work during the day. They are all "now employed in different manufactures and continue to attend a "Reading Class.

"The approvers' wives were at first very reluctant to work, but their "dislike to be employed has gradually been overcome, and all are "now engaged in spinning cotton into thread.

"In accordance with the wish of the Judicial Commissioner, the manu-"facture of Tents was commenced on in the month of July last, under "the superintendence of a few experienced workmen from the Jub-"bulpore School. The number of Tents which have as yet been made "is necessarily small; but those which have been turned out are much "approved of. All the materials, with the exception of the greater "portion of the cloth required for the Tents, are made up in the School, "and are of excellent quality. The number of men available is not "sufficient to manufacture the quantity of cloth required.

"It could not have been anticipated, that any considerable quantity of "goods would be manufactured during the first year subsequent to the "formation of the School. For it must be remembered, as above-men-"tioned, that the approvers were new to work of any description, and "much time was necessarily taken up in teaching them the different "trades. Under these circumstances, I trust that the result of their "labors will be considered satisfactory.

"The following articles have been manufactured during the year:—

| | |
|---|---|
| "Tents of different sizes | 9 |
| "Table Cloths ditto | 24 |
| "Woollen Carpets ditto | 3 |
| "Kidderminster Carpeting, yards | 197 |
| "Sutrunjees, ditto | 13 |
| "Towels and Napkins, dozen | 64½ |

| | | |
|---|---|---|
| "The Sale Value of these articles amounts to | Co.'s Rs. | 2,102-1-3 |
| "Out of which has been paid for raw materials | ,, | 1,573-8-10 |
| "And to hired work-men | ,, | 129-2-9 |
| "Approvers and their sons | ,, | 42-13-0 |
| "Leaving a balance in favor of the Institution of | ,, | 356-8-8 |

"The demand for the manufactures of the School has not been "so considerable as might have been expected; but it is some time "before the establishment of an Institution of this description becomes

" sufficiently known to gain the confidence of the public. Connected as
" it is, however, with an Institution of such excellence as that at Jub-
" bulpore, the manufactures from which are so highly appreciated, and
" in such extensive demand, I confidently expect that the produce of the
" School at Lahore will be at all times readily disposed of, notwith-
" standing the disadvantages which it labors under from the competi-
" tion of a large Jail at Lahore itself and at the neighboring Stations."

11. The thirty-one sons of Thug approvers located at Meerut in 1850 are now working independent of Government advances, or of any assistance beyond that of the pay of an Overseer to write their letters, keep their accounts, &c.

12. They are rapidly liquidating the debt due to Government for advances made when the Establishment was first formed, and in another twelve months, will be above the world, with a Factory and Machinery of their own, and in a position to remunerate an Overseer of their own appointing.

13. Mr. Williams, the Overseer of the Jubbulpore School, continues to perform his duties with exemplary zeal and industry.

14. His commission during the year has averaged Rupees 431 per mensem, and I have no longer any dread of his being induced to leave the Institution for any better remunerated appointment; but the absence of an Assistant, who could take his place in the event of his being driven from his post by sickness, or by the occurrence of any unforeseen contingency, makes me anxious for the interests of the Institution, and I beg to solicit authority to apply to the Military Authorities for the services of an intelligent Non-Commissioned Officer, who, while retaining his position in the Army, with claim to pension, &c., may receive Staff Pay from the Institution, to be regulated in amount by his efficiency and conduct.

I have the honor to be, &c.,
(Signed) J. SLEEMAN,
*General Superintendent of Operations for the*
*Suppression of Thuggee and Dacoity.*

JUBBULPORE;
*General Superintendent's Office,*
*The 26th February 1857.*

*ANNUAL ACCOUNT of the Jubbulpore School of Industry, from 1st January to 31st December 1856.*

*Jubbulpore, 1st January 1857.*

| Liabilities | | Rs. As. P. | Rs. As. P. |
|---|---|---|---|
| Due to Government on the 1st January 1856 .. .. .. .. .. | | 0 0 0 | 0 0 0 |
| Paid within the year .. .. .. .. .. | | 0 0 0 | 0 0 0 |
| Due to Government on the 1st January 1857.. .. .. .. .. .. .. | | 0 0 0 | 0 0 0 |
| Due to Individuals on the 1st January 1856 .. .. .. .. .. .. | | 4,431 9 10½ | 0 0 0 |
| Re paid in Goods within the year .. | | 4 431 9 10½ | 0 0 0 |
| Due to Individuals on the 1st January 1857 .. .. .. .. .. .. | | 0 0 0 | 6,304 0 4½ |
| Due to General Superintendent's Office | | 0 0 0 | 5,000 0 0 |
| Due to Central Jail, Agra, for Cloth supplied .. .. .. .. .. .. | | 0 0 0 | 1,000 0 0 |
| Due to Work-men on the 1st January 1857 .. .. .. .. .. .. .. | | 0 0 0 | 1,061 3 0¾ |
| Total Liabilities .. | | ...... | 13 365 3 5¼ |

| Assets | | Rs. As. P. | Rs. As. P. |
|---|---|---|---|
| Fixed Stock in Trade, Tools, and Building on the 1st January 1856 .. .. .. .. | | 16,955 15 6¼ | |
| Expended in addition within the year.. .. .. .. .. | | 1,810 6 8 | |
| | | | 18,766 6 2¾ |
| Live Stock in Raw Materials and Manufactured Goods on the 1st January 1857 . .. | | 34,224 10 0½ | |
| Outstanding Debts on the 1st January 1857 .. .. .. .. | | 46,644 14 10¼ | |
| Advanced for Dosootee, Khadee, Fuels, &c. .. .. .. . | | 2,055 7 5¾ | |
| | | | 82,925 0 4¼ |
| *Sums Available.* | | | |
| In hand of Messrs. Binny and Co Madras .. . | 3,019 15 4 | | |
| In hand of Messrs. Remington and Co, Bombay .. | 4,779 7 0 | | |
| In hand of Messrs Allan, Deffell and Co, Calcutta | 5 13 3 | | |
| Co's Rs. .. | 7,805 3 7 | | |
| Total Assets .. | | .... | 1,01,691 6 7¼ |

(Signed) H. WILLIAMS,
*Overseer.*

(Signed) J SLEEMAN,
*General Superintendent.*

## *Abstract.*

| | | | |
|---|---|---|---|
| Expended for Raw Materials within the year .. .. | 83,235 1 8½ | | |
| Dieting and Clothing of Prisoners ditto.. .. .. | 4,234 15 4¾ | 87,470 1 1¼ | |
| Paid for Work done by Approvers and their Sons within the year | | 14,802 9 5½ | |
| Ditto ditto Hired Work-men ditto .. | | 1,925 4 4 | 1,04,197 14 10¼ |
| Overseer's Commission within the year .. .. .. .. .. .. | | 5,176 4 0¼ | |
| Amlahs, &c., ditto .. .. .. .. .. | | 570 0 0 | |
| School Moonshee, ditto .. .. .. | | 156 0 0 | 5,902 4 0½ |
| | | | 1,10,100 2 11¼ |
| Refunded to the General Superintendent's Office, ditto .. .. | | 22,000 0 0 | |
| Ditto to Chunderbhan, Treasurer, ditto .. .. .. .. .. .. .. | | 1,000 0 0 | 23,000 0 0 |
| Total, Co.'s Rs. .. | | ...... | 1,33,100 2 11¼ |

| | | |
|---|---|---|
| In hand on the 1st January 1856.. | 0 0 0 | 187 4 2½ |
| Received for Goods sold within the year .. .. .. .. .. .. | 1,04,851 11 8 | 1,04,851 11 8 |
| Borrowed from the General Superintendent's Office within the year .. .. .. .. .. | 0 0 0 | 27,000 0 0 |
| | | 1,32,038 15 10½ |
| Balance due to the Work-men on the 1st January 1857 .. .. | 0 0 0 | 1,061 3 0¾ |
| Total, Co.'s Rs. .. | ...... | 1,33,100 2 11¼ |

(Signed) J. SLEEMAN,
*General Superintendent.*

(Signed) H. WILLIAMS,
*Overseer.*

## APPENDIX No. 2.

*Number and Description of Articles manufactured in the Jubbulpore School of Industry during the Year* 1856.

401 Tents of sizes.
301¾ Yards Brussels Carpeting.
961 Yards Scotch Carpeting.
4,559½ Yards Kidderminster Carpeting, of which 1,196 yards sold, the remaining 3,363½ yards were used up as Carpeting for Tents.
350 Pieces Table Cloths of different sizes.
212 Dozen Table Napkins.
145 Dozen Bathing and Wash-hand Towels.
15 Pieces Plaid.
69 Pieces Cotton Horse Clothing.
3 Pieces Woollen Horse ditto.

(Signed) J. SLEEMAN,
*General Superintendent of Operations for the Suppression of Thuggee and Dacoity.*

# STATEMENT

SHOWING THE

# NUMBER OF CRIMINALS

ARRESTED AND DISPOSED OF BY

# OFFICERS OF THE THUGGEE DEPARTMENT

DURING 1856.

# STATEMENT

SHOWING THE

# NUMBER OF CRIMINALS

ARRESTED AND DISPOSED OF BY

# OFFICERS OF THE THUGGEE DEPARTMENT

DURING 1856.

No. 29 OF 1857.

FROM

MAJOR J. SLEEMAN,

*General Superintendent of Operations for the Suppression of Thuggee and Dacoity,*

To

G. F. EDMONSTONE, ESQUIRE,

*Secretary to the Government of India, Foreign Department,*

FORT WILLIAM.

*Dated Jubbulpore, the 20th March* 1857.

SIR,

I HAVE the honor to forward, for submission to the Right Hon'ble the Governor General of India in Council, Tabular Statements* showing the number of professional criminals apprehended and disposed of by the Officers of the Department during the year 1856, and the number of each class still remaining at large on the Continent of India, against whom sufficient information has been recorded to warrant their arrest.

Establishments at Lahore how employed.

2. Forty-five Phansigar Thugs, fourteen Dhatooreea Thugs, and twenty-six Professional Dacoits, have been arrested by the Establishments in the Punjaub during the year.

3. No cases of Thug, Murder, or of Dacoity, by the Professional Dacoits of the Punjaub, were reported to have occurred within the Province during the period under review.

* Nos. 1, 2 and 3.

4. Strict search has been made for organized Gangs of Poisoners, who were supposed to exist in the Mooltan and Goozcerat Districts, but no trace of such gangs has been discovered, and the local Authorities are, I believe, now satisfied, that the cases of murder by poison occurring in the Punjaub are perpetrated by desultory offenders, who, as in the old Provinces, infest the great highways and depredate independently of each other.

No trace of organized Gangs of Poisoners discovered in the Punjaub.

5. Lieutenant E. D. R. Ross officiated for Captain Lawrence, Extra Assistant General Superintendent, from 18th April to 7th November 1856, and conducted the duties of the Office very satisfactorily.

6. The Establishments under Captain Chamberlain, Assistant General Superintendent at Etawah, have been actively engaged in efforts to break up the Bhudoureea Dacoit Gangs, which have been for many years located on both banks of the Chumbul River, and in the District of Kunawur, in the Gwalior Territory; and this very desirable consummation has, I am happy to say, been in a great measure effected by the arrest of sixty-two criminals, and among them many leaders of note and influence, some of whom have been admitted approvers.

The Establishments at Etawah how employed.

Nine of the Bhudoureea Dacoits admitted as approvers.

7. The Gwalior Durbar have evinced every disposition to assist Captain Chamberlain, by furnishing him with Perwannahs on the local Authorities; but the petty Officials are generally interested in protecting the leaders of Dacoit Gangs, who pay liberally for impunity, and Captain Chamberlain has found that, while pretending to assist, they in most instances thwarted his arrangements.

Local Authorities in the Gwalior Territory frequently thwart arrangements for the arrest of criminals.

8. The most notorious leader of Bhudoureea Dacoits, Pretum Singh, has up to this time managed to evade capture.

9. He has a great many friends and connexions among the landholders in Etawah and Mynpooree, who notoriously conceal and shelter him when pursuit grows warm in the Gwalior Territory, and yet manage it so cleverly as to avoid conviction.

Zemindars in Etawah and Mynpooree protect Dacoit leaders from arrest.

10. If this man were arrested, I should have no fear of a reorganization of the Bhudoureea Dacoit Gangs, as he is the only leader still at large, in whose influence and skill the non-scattered members have unlimited confidence.

Pretum Singh, the only influential leader of Bhudoureea Dacoits, still at large.

11. The most strenuous efforts have been made for Pretum's capture, and as these will be sustained, I hope soon to be able to report his apprehension.

12. The Dacoity Statements for 1855-56 show that the operations against the Dacoits along the Gwalior frontier have had the effect of almost entirely suppressing the crime of Dacoity in those Districts most exposed to attack.

The crime of Dacoity almost entirely suppressed in the Dooab.

13. In the conterminous Districts of Etawah and Mynpooree, no case has occurred during the year 1855-56, and the information recorded regarding the Bhudonreea Gangs is now so extensive and complete, that the operations of another year will suffice to make this suppression permanent.

Information regarding the Bhudonreea Dacoit Gangs complete.

14. Captain Chamberlain was in charge of the Etawah Office throughout the year.

15. The Establishments under the Extra Assistant at Agra have been exclusively employed in the pursuit of the Meenah Dacoits of Ulwur and Rajpootana, and considering the very limited means at his disposal, and the difficult nature of the duty, I consider Major Williams's success has been considerable.

The Establishments at Agra how employed.

16. Of sixty-six Meenahs convicted and sentenced, several approvers have been made, and the information recorded will enable the Department to pursue to conviction some sixty or seventy of their accomplices still at large.

Seven Meenah Dacoits have been admitted as approvers.

17. Members of the Meenah class are found all over Rajpootana, in the Ulwur Rajah's Territory, and in that of Bhurtpore.

18. Fortunately for society, all Meenahs are not Dacoits; but they have all an unusually strong feeling of clanship, and never fail to sympathise with and support, by every means in their power, any members of the class how are pursued for offences against the Law.

Arrest of Meenah Dacoits rendered very difficult by the strong feeling of clanship common to the whole tribe.

19. This feeling, added to the absence of all zealous co-operation on the part of native officials in independent States, make the pursuit and arrest of Meenah Dacoits a most difficult duty, requiring the greatest tact and

Want of zealous co-operation on the part of native officials in independent States.

perseverance on the part of the Police Agents engaged in it, and sufficiently accounts for the limited success attained.

Meenah Dacoity first induced by the famine of 1833.

20. From information obtained by Major Williams, it appears that the famine of 1833 first induced the Meenahs to follow Dacoity as a profession, and the great success of two gangs, under Girdharee and Maneea Jemadars, who depredated, at that period, in our Provinces, with great impunity, has served to perpetuate their taste for plunder.

Among the Meenahs rank not hereditary, as among the Budhuks and Thugs.

21. The rank of Jemadar is not hereditary among them, as it was among the Budhuk class: their leaders are chosen from among those who have displayed most enterprize and courage on former expeditions, and no leaders so selected find the smallest difficulty in filling their ranks with eager followers, whenever an expedition is proposed.

Meenahs have no exclusive language; they worship "*Davee*," and respect omens.

22. The Meenahs have no exclusive language like the Thugs, the Budhuks, and some others of the criminal classes; but they resemble the former in their worship of "*Davee*" (the Goddess of Destruction) and in their respect for omens, without taking which they never proceed on an expedition.

Native system of fining Chowkeedars encourages Dacoity.

23. Members of the class are very generally employed as Chowkeedars throughout Rajpootana and the Ulwur Territory, and the system which obtains in these, in common with most Native States, of fining the Chowkeedar of a village in which a robbery takes place, in the full amount of the property lost, obliges the party so fined to resort to Dacoity for means to meet the demand.

24. In narrating the events of their life of crime, they frequently say, we undertook such an expedition to find means to meet a demand made upon us in consequence of a robbery which occurred in such and such a village, of which a relative of ours was the Chowkeedar.

Fining Chowkeedars a very favorite system in Native States.

25. This system, so evidently calculated to encourage crime, is a favorite one among native rulers, as it relieves them from the trouble of investigation and furnishes the means of reimbursing the plundered party, if the subject of a Government powerful enough to demand it, without expense to the State.

26. Major Williams is of opinion, that the Meenahs might readily be reclaimed by judicious management and extensive employment in the Police of Districts ; but my own experience leads me to a very different conclusion.

Meenah character false and treacherous.

27. I consider them to be a race essentially criminial, and of a nature too false and treacherous to be trusted with any employment which would remove them from strict and constant supervision.

28. Nothing but a conviction of the extreme probability of detection, and of the certainty of very severe punishment following it, will, in my opinion, deter Meenahs from violent crime, and the operations now in progress against them are best calculated to effect this object.

29. Major Williams, Extra Assistant General Superintendent, was in charge of the Agra Office throughout the year.

Lucknow Office Establishments how employed.

30. The Establishments at Lucknow have been engaged throughout the year in a search for the fugitive Phansigar and Dhatooreea Thugs, supposed to be still at large in Oudh, and in carrying out a system of Patrols on the great thoroughfares, which has the effect of deterring the Budhuks, who still haunt the Turaee, from leaving its fastnesses for the purpose of plunder.

Cases of murder by poison in Oudh committed by offenders unknown to the present approvers.

31. Several murders by poison have occurred in the Province during the year ; but nothing has transpired to connect the few professional poisoners still at large with these cases, which appear to be the work of desultory offenders unknown to the approvers.

32. Captain Weston was in charge of the Lucknow Office throughout the year.

The Establishments at Jubbulpore, Nagpore, and Indore how employed.

33. The Establishments at Jubbulpore, Nagpore, and Indore, have been chiefly engaged in the pursuit of the Goar and Mooltanee Bunjarahs, the only classes of professional Dacoits which have lately been actively engaged in Southern India.

Bunjarahs ostensibly employed in carrying corn and salt.

34. These Bunjarahs are ostensibly engaged in carrying corn from the interior of the Saugor and Nerbudda Provinces to the Coast, and salt from the Coast to the interior ; but never fail to avail themselves of the opportunities their wandering life affords for the practice of Dacoity.

35. Conceiving that the depredations of these classes might at once be checked and eventually suppressed, by a system of escorts supplied from the Police of Districts, I furnished the Resident at Hyderabad, and the Commissioners at Nagpore and in the Saugŏr and Nerbudda Territories, in May last, with a list of thirty-six of the principal Bunjarah Tandahs (or Camps), and a Table showing the routes usually adopted by them in their progress through the country, and the sites of their encampments during the monsoon.

List of thirty-six Tandahs and Table of Routes furnished to the local Authorities.

36. I at the same time suggested arrangements by which every Tandah might be kept under the surveillance of the Police from the time it entered North Berar, till it again crossed that frontier on its way to the Coast.

Arrangements for the escort of Tandahs suggested.

37. These arrangements have been generally adopted, and their effect has already been felt in the almost total cessation of Dacoities in the Saugor and Nerbudda Territories since that period.

38. The thirty-six Tandahs here alluded to have about 6,000 men attached to them, and of this number only 487 are denounced and registered Dacoits; but as every new approver names fresh men as his accomplices, we must conclude that there are hundreds of Dacoits among them yet unknown to us.

Of 6,000 men attached to the Tandahs, only 487 are at present known to be Dacoits.

39. While the Berar Province and the Nagpore Territory remained under native rule, it was impossible to arrange any combined plan of operations by which we could hope to suppress thoroughly this formidable system of depredation; and though the arrests and convictions were numerous, the system remained unshaken.

40. But now that these Provinces have come under British management, and a regular system of Police has been established, the great difficulties will vanish before well-sustained efforts, and in a few years a very great evil will, I hope, be completely eradicated.

41. The work in the Hyderabad Office has been greatly reduced since the cession of Berar from the "Paidees," "Thakoonkars," and "Koolhatees" having in a great degree renounced their predatory habits and taken to tillage and other honest occupations.

Reform among the Paidees, Thakoonkars, and Koolhatees.

42. This happy change has been induced by the judicious measures adopted towards these rude tribes by the Deputy Commissioners in charge of Districts in Berar, who have employed them extensively in the Rural Police, and improved their self-respect by restoring them to their village rights, of which, under the Native Government, they had been deprived.

Judicious treatment of these rude tribes by the Deputy Commissioners in Berar.

43. The Establishments at Belgaum in the Dekhun have been exclusively employed in the pursuit of Kaikaree Dacoits; but arrests have not been numerous, owing to the general alarm excited among the tribe by the successful pursuit of former years, and the consequent flight of the denounced members from their usual haunts to other parts of the country, where they are, with extreme difficulty, traced and apprehended.

Belgaum Office Establishments how employed.

44. A system of registration, similar to that applied to the Muzubbee class in the Punjaub, has been projected for this rude tribe within the last year, which will, when completed, enable Police Officers to check their wandering propensities, and thus assist the efforts now making to induce the Kaikarees to settle down to habits of industry.

System of registration projected.

45. Captain Hervey proceeded to England on Furlough in April 1856, and Captain Dickson, of the Bombay Army, officiated for him throughout the remainder of the year.

I have, &c.,

(Signed) J. SLEEMAN,

*General Superintendent of Operations for the Suppression of Thuggee and Docoity.*

JUBBULPORE;
*General Superintendent's Office,*
*The 28th March* 1857.

## No. 1.

*TABULAR STATEMENT showing the number and description of Criminals apprehended and disposed of by each Officer of the Department during the Year* 1856.

| DESCRIPTION OF CRIMINALS. | No of Prisoners. | | | | Disposed of during the Year. | | | | | | | | | | | Remaining under examination on the 31st Dec. 1856. | | | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Remaining under examination on the 31st December 1855. | Arrested during the year. | Received during the year. | Total. | Death. | Transportation beyond Seas. | Imprisonment for life. | Ditto for limited period. | Confined under requisition of security. | Released with security. | Ditto without security. | Died. | Absconded. | Sent to the Officers of the Department for commitment. | Transferred to Local Authorities. | In the Sessions Court. | In the Assistant's Court. | Total. | |
| ***Thug Phansigar.*** | | | | | | | | | | | | | | | | | | | |
| Etawah Office | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | |
| Lahore ditto | 23 | 45 | 0 | 68 | 0 | 18 | 0 | 4 | 0 | 19 | 3 | 1 | 0 | 0 | 8 | 1 | 14 | 68 | |
| Total | 23 | 46 | 0 | 69 | 0 | 18 | 0 | 4 | 0 | 19 | 3 | 1 | 0 | 0 | 8 | 1 | 15 | 69 | |
| ***Thug Dhatooreea.*** | | | | | | | | | | | | | | | | | | | |
| Agra Office | 0 | 4 | 3 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 7 | |
| Etawah ditto | 1 | 0 | 10 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 5 | 0 | 0 | 11 | |
| Jubbulpore ditto | 0 | 0 | 28 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 5 | 28 | |
| Lucknow ditto | 1 | 4 | 8 | 13 | 0 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 8 | 1 | 0 | 13 | |
| Lahore ditto | 0 | 14 | 0 | 14 | 0 | 0 | 0 | 1 | 3 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 3 | 14 | |
| Total | 2 | 22 | 49 | 73 | 0 | 3 | 0 | 1 | 4 | 0 | 30 | 0 | 0 | 6 | 14 | 1 | 14 | 73 | |

| *Dacoits.* | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Agra Office | 0 | 22 | 57 | 79 | 0 | 4 | 3 | 0 | 3 | 0 | 13 | 6 | 0 | 21 | 17 | 2 | 10 | 79 |
| Belgaum ditto | 2 | 5 | 13 | 25 | 0 | 2 | 0 | 0 | 1 | 0 | 9 | 0 | 0 | 0 | 7 | 0 | 6 | 25 |
| Etawah ditto | 77 | 19 | 59 | 155 | 1 | 19 | 0 | 17 | 18 | 1 | 10 | 2 | 2 | 37 | 32 | 0 | 16 | 155 |
| Hyderabad ditto | 23 | 11 | 16 | 50 | 0 | 8 | 0 | 0 | 0 | 0 | 12 | 1 | 1 | 0 | 0 | 2 | 26 | 50 |
| Indore ditto | 7 | 13 | 91 | 111 | 0 | 20 | 0 | 19 | 7 | 0 | 0 | 5 | 0 | 6 | 52 | 0 | 2 | 111 |
| Jubbulpore ditto | 0 | 13 | 24 | 37 | 0 | 1 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 29 | 37 |
| Lucknow ditto | 0 | 0 | 21 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 | 21 |
| Lahore ditto | 5 | 21 | 0 | 26 | 0 | 3 | 0 | 1 | 0 | 17 | 3 | 0 | 0 | 0 | 0 | 0 | 2 | 26 |
| Nagpore ditto | 24 | 3 | 34 | 61 | 0 | 3 | 4 | 3 | 0 | 5 | 1 | 0 | 0 | 11 | 15 | 0 | 19 | 61 |
| Ellichpore ditto | 0 | 6 | 2 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 8 |
| Total | 138 | 113 | 322 | 573 | 1 | 60 | 7 | 40 | 33 | 23 | 48 | 15 | 3 | 77 | 145 | 4 | 117 | 573 |

(Signed) J. SLEEMAN,
*General Superintendent of Operations for the Suppression of Thuggee and Dacoity.*

JUBBULPORE;
*General Superintendent's Office,*
*The 28th March* 1857.

## No. 2.

*STATEMENT showing the number of Thugs arrested during the Year* 1856 *by the Officers of the Thuggee Department, and the number still remaining at large on the Continent of India.*

| Number. | Class of Criminals. | Remaining at large *vide* Report for 1855. | Denounced by Approvers admitted in 1856. | Total. | Arrested during the year. | Remaining at large on the 1st January 1857. | Remarks. |
|---|---|---|---|---|---|---|---|
| | *Thugs.* | | | | | | |
| 1 | Punjabee Phansigar | 559 | 0 | 559 | 45 | 514 | |
| 2 | Punjabee Dhatooreea | 0 | 14 | 14 | 14 | 0 | Desultory offenders. |
| 3 | Hindoostanee Phansigar ... ... ... | 400 | 0 | 400 | 1 | 399 | A great many of these were men of advanced age when they first fled from justice in 1855, and a third of them may naturally be supposed to have died ere this. |
| 4 | Dhatooreea ........ | 38 | 8 | 46 | 8 | 38 | The remnants of a Colony of professional poisoners, who were found located in several villages upon the Frontiers of Oudh and the Allahabad Districts. |
| | Total ...... | 997 | 22 | 1,019 | 68 | 951 | |

(Signed) J. SLEEMAN,

*General Superintendent of Operations for the Suppression of Thuggee and Dacoity.*

JUBBULPORE;
*General Superintendent's Office,*
*The 28th March* 1857.

No. 3.

*STATEMENT showing the number of Dacoits arrested during the Year* 1856 *by the Officers of the Department, and the number still remaining at large on the Continent of India.*

| Number. | CLASS OF CRIMINALS. | Remaining at large *vide* Report for 1855. | Denounced by Approvers admitted in 1856. | Total. | Arrested during the year. | Remaining at large on the 1st January, 1857. | REMARKS. |
|---|---|---|---|---|---|---|---|
| | *Dacoits.* | | | | | | |
| 1 | Budhuks .. .... | 753 | 1 | 754 | 2 | 752 | The remnants of this class of Dacoits, by far the most formidable we have had to deal with, are still scattered through the Oudh and Gorruckpore Turaees, and along the banks of the Chumbul. The men occupy themselves in shooting and snaring game, while the women and children are sent into the neighbouring villages to beg. They have not been known to depredate in our Provinces since 1845. |
| 2 | Mooltanees, Chogras, and Goar Bunjarahs | 411 | 24 | 433 | 26 | 412 | These three classes of Bunjarah Dacoits are located in Malwa, Bhopal, the South-east portion of the Nagpore Territories, and the Valley of Berar. Their ostensible occupation is the carriage of salt and grain, and the wandering life they lead affords ample opportunity for the exercise of their real profession, Dacoity. In their attacks they are armed with swords and bludgeons, and frequently resort to torture for the discovery of hidden property. |
| | Carried over .. | 1,167 | 25 | 1,192 | 28 | 1,164 | |

## No. 3.—(*Continued.*)

| Number. | Class of Criminals. | Remaining at large *vide* Report for 1855. | Denounced by Approvers admitted in 1856. | Total. | Arrested during the year. | Remaining at large on the 1st January 1857. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Brought forward .. | 1,167 | 25 | 1,192 | 28 | 1,164 | |
| 3 | Kaikarees .. . | 483 | 50 | 533 | 22 | 511 | The Kaikaree Dacoits form one of about twenty predatory classes infesting the whole of the Dekhun. They are ostensibly basket-makers and musicians; but their real profession is Burglary and Dacoity. Their usual arms are swords and spears, and their attacks are generally attended with loss of life or severe wounding. |
| 4 | Kunjais and Sansees | 152 | 0 | 152 | 0 | 152 | Kunjais and Sansees, two predatory classes of Hindoos, are found scattered all over India; but are particularly numerous in Malwa. They have no ostensible occupation, and indulge in Dacoity, Cattle-lifting, or Petty Theft, as opportunity offers. |
| 5 | Paidees . .. ... | 99 | 0 | 99 | 0 | 99 | These three predatory classes of Hindoos infest the whole of the Nizam's Territory and part of that of Nagpore. They are extremely numerous, but are more addicted to Burglary and Petty Theft than to Dacoity, and rarely venture on the latter crime, but in company with Dacoits of more determined character, such as the Chogra and Goar Bunjarahs. |
| 6 | Thakoonkars .. .. | 53 | 0 | 53 | 2 | 51 | |
| 7 | Koolhatees .. .. | 169 | 2 | 171 | 6 | 165 | |
| | Carried over .. | 2,123 | 77 | 2,200 | 58 | 2,142 | |

No. 3.—(*Continued.*)

| Number. | Class of Criminals. | Remaining at large *vide* Report for 1855. | Denounced by Approvers admitted in 1856. | Total. | Arrested during the year. | Remaining at large on the 1st January 1857. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Brought forward .. | 2,123 | 77 | 2,200 | 58 | 2,142 | |
| 8 | Keechuks .. .. | 120 | 0 | 120 | 0 | 120 | The Keechuks are a class of Budhuks, who inhabit the Morung or Turaee from Poorneea Eastward to Titalya. They have not been known to depredate in our Provinces since 1839. |
| 9 | Beriahs .. .. .. | 42 | 8 | 50 | 11 | 39 | The Beriahs infest a great part of Southern India and the Lower Doab. They are ostensibly rope-makers, but indulge in Dacoity, Burglary, and Petty Theft. |
| 10 | Maugh .. .. .. | 34 | 19 | 53 | 0 | 53 | A predatory class infesting Kandeish. The Maughs resemble the Kaikarees in character and habits; but are not so numerous. |
| 11 | Gojurs, &c. .. .. | 12 | 0 | 12 | 0 | 12 | |
| 12 | Bhudooreea .. .. | 0 | 64 | 64 | 19 | 45 | A class of Rajpoots, named after a small Province in Gwalior, in which they principally reside. They are all agriculturists; but a great many among them have adopted Dacoity as a profession. |
| | Carried over .. | 2,331 | 168 | 2,499 | 88 | 2,411 | |

## No 3.—(Concluded)

| Number | Class of Criminals | Remaining at large vide Report for 1855 | Denounced by Approvers admitted in 1856 | Total | Arrested during the year | Remaining at large on the 1st January 1857 | Remarks |
|---|---|---|---|---|---|---|---|
| | Brought forward . | 2,331 | 168 | 2,499 | 88 | 2,411 | |
| 13 | Meenah . .. .. | 108 | 22 | 130 | 22 | 108 | A class of Hindoos found in Rajpootana, Ulwur, and Bhurtpore, where they are extensively employed as Village Chowkeedars. The Meenahs are essentially lawless, and indulge in Dacoity, Burglary, and Petty Theft, as opportunity offers |
| 14 | Moogeeah . .. .. | 98 | 0 | 98 | 3 | 95 | A very low class of Hindoos found thinly scattered over Bhopal and Ulwur |
| | Total .. | 2,537 | 190 | 2,727 | 113 | 2,614 | |

(Signed) J SLEEMAN,
*General Superintendent of Operations for the Suppression of Thuggee and Dacoity*

JUBBULPORE,
*General Superintendent's Office,*
*The 28th March* 1857

# SURVEY

OF THE

# ANDAMANS.

# SURVEY

OF THE

# ANDAMANS.

To

The Most Noble

CHARLES MARQUIS CORNWALLIS, K. G.,

*Governor General, &c., in Council.*

My Lord,

To a former Report, which I had the honor to lay before your Lordship, June 19th 1789, with a general Chart and Plans of three Harbours, it is now necessary to add a sequel; having completed the circuit of the Andamans since that period, discovered an excellent Harbour, a number of Inlets, and several dangerous Coral Banks.

Having, by your Lordship's order, engaged some Artificers, Sepoys, and Laborers, and also provided the necessary Stores, I left Calcutta in the beginning of September 1789, to form a small Settlement at the Port now termed in the Chart Old Harbour, with instructions to prosecute the Survey when the Vessels could be spared from the service of the Settlement. Soon after my arrival, I made a particular Survey of Old Harbour, a plan of which I had the honor to transmit to your Lordship from thence.

East Coast Andaman.

On March the 20th 1790, having left Lieutenant Wales in charge at the Settlement, I sailed with the *Ranger* and *Viper*, accompanied by Captain Kyd in the *Experiment*, to prosecute the Survey, and with an intention to complete the circuit of the Andamans. Our route being from Old Harbour, up the East Coast of the Island, I shall observe the same progression in this Report.

From the North point, which forms the entrance of Old Harbour, the land rises rather abruptly to a height which may be seen above 30 miles distant: a continuation of this, in a broken ridge, in the direction of North, and to an extent of 9 miles, very pointedly marks, to the Navigator, the situation of Old Harbour. At the North extremity of the ridge, the descent is more gentle, terminating where an extensive Inlet is formed, named in the Chart Shoal Bay; it retreats to Southward, behind the high land, and to Northward, round an Island where a second mouth is formed, which abounds with Oysters. On a reference to the Chart, it will be perceived that this extensive double Inlet is too shallow for the reception of Ships.

Mark for the situation at Old Harbour.

Shoal Bay.

Oyster Bay.

Two miles Northward of Oyster Bay, in Latitude 11° 58′, is Port Meadows, a small, but convenient, Harbour. The passage in, is very narrow, South of an Island, which is situated in the entrance. The interior part of this Harbour is environed with Coral Reefs The surrounding land in general is low, with extensive tracts of Mangrove Jungle, intersected by Creeks, and forming several Islands.

Port Meadows.

Two miles Northward of Port Meadows is situated the Eastern entrance of Middle Strait. The Bar of 17 fathoms, the intricacy and narrowness within, together with the difficulty and danger of access from Westward, render it useless for Ships of burthen, but it will afford an easy communication between the East and West Coasts of the great Island. The tides in this Strait are not so strong as might be expected. It is here proper to observe, that the Coast from Shoal Bay to Middle Strait ought not to be approached without caution closer than 2 miles, as there are some dangers, which are inserted in the Chart, extending nearly that distance from the land.

Middle Strait.

Dangers.

Northward, from Middle Strait, there are great inequalities in the surface of the land, some parts low and others rising very abruptly, and nearly insulated by the Sea. The direction is North-East by North, but deeply indented with Bays and Inlets. The soundings are regular, and no dangers without the depth of 10 fathoms. The distance to Strait Island is 13 miles, the direction North-East. Here the Archipelago contracts the breadth of Diligent Strait to 3 leagues,

and from Strait Island to Round Hill (which is the narrowest part,) the breadth is only one league. The number and variety of the Islands, agreeably diversified with rugged cliffs and luxuriant forests, present a prospect beautiful and picturesque. On a near approach, the Caves appear, which are inhabited by innumerable flocks of the small swallow, which make the edible bird's nest, so much valued by the Chinese as a delicacy and restorative. The principal Cave is situated at the South point of Strait Island, which is rocky, but not exceeding 40 feet in height. The entrance, which is washed by the tide, is an irregular aperture of about 6 feet wide, and the same height: on advancing 30 or 40 feet, the height diminishes to 4 feet, and the breadth increases to 20. Here it is rather dark and very warm, and the top and sides of the Cave are covered with nests; an astonishing number of birds, twittering and on the wing, whisk past the ears and eyes; this, contrasted with the melancholy noise of the waves resounding through the gloomy Cavern, formed a very uncommon and interesting scene. The birds are probably induced to choose this situation from the Caves being inaccessible either to snakes or quadrupeds, and probably defensible against birds of prey The nests in general are in form of the quarter of a sphere, of $2\frac{1}{2}$ inches diameter: of this shape one of the sections being firmly fixed to the rock, the other section leaves the nest open above. The substance is glutinous; those most in estimation are white and semi-transparent. It has been doubtful, and various conjectures have been formed of what the nests are composed. In smaller and more accessible Caves, I have observed a mucilage exuding from the rock, moistened by exhalations from the Sea, which washes the lower part of those Caves. This mucilage, on being lavigated and dried, had both the texture, color, and taste of the nest; but what removed all my doubts of this being the substance, was seeing the birds, in immense numbers, resorting to a Cave very productive of the mucilage, in the month of January, which is the season the birds build their nests. It may now be presumed, that the nests are neither of animal nor of vegetable, but of a mineral substance. But to return to my more immediate duty.

Bird Nest Caves.

Composition of the Birds' Nests.

It has been already observed, that the breadth of Diligent Strait is contracted to the breadth of one league between Strait Island and Round Hill, but besides suffer-

Diligent Strait.

ing this contraction, the soundings beyond this become very irregular, and there are many dangerous patches of coral on either side; one in particular, half a league East of Strait Island, is very dangerous. It will appear in the Chart. The Spit, extending about the same distance North from Round Hill, the reefs connected with middle and North Buttons, and an extensive and dangerous Coral Bank and Reef to North-west of those Islands. These ought to deter strangers from entering Diligent Strait, except in cases of necessity; should such a measure become necessary, strict attention to the following instructions will lead through the Strait with safety. If entering from Northward, first steer for the North Button, which is a small Island rendered remarkable from several white cliffs; pass to right or North-West of it, not exceeding one mile distant; when abreast, steer North-East and pass Middle Button, leaving it also to North-East and observing the same distance; when the last is brought to bear East North-East, it will be necessary to alter the course to South, and to steer in that direction, until the North Button is just perceived to Eastward of Middle Button; with this mark steer about South-West by South, observing to keep the Islands in the same position, and this will lead through the narrow part of the Strait clear of the dangers of either side. A reference to the Chart will make the instructions more easily understood.

Dangers.

Directions for Diligent Strait.

The Archipelago appears to consist of eleven Islands, of various sizes. I speak with doubt, as the largest or fourth Island may probably be intersected by narrow channels, which would increase the number. The South Island, which is very small, bears from Old Harbour nearly East North-East, distant 7 leagues. It is surrounded by a Coral Bank to South and East, the least water on it is 7 fathoms, except a small reef from the South extremity, which has 3 fathoms, about half a mile distant from the Island. The passage between this and the second Island is clear, the ground coral, with some spots not exceeding the depth of 5 fathoms.

Archipelago, 1st Island.

1st Passage.

On the South extremity of the second Island, there are a few cocoanut trees. It is moderately high, the major part rocky, but covered with trees, except some cliffs, which rise abruptly from the sea, at the North-East end, near the North-

2nd Island.

West extremities. From the South point there is a reef, on which the sea breaks half a mile from the shore. A Bay is formed between the two Northern points, but it is too shallow for Ships.

2nd Passage, Archipelago.

The passage between the second and third is nearly 2 miles broad, and clear of danger, with very deep water, near the third Island.

The third Island is of a triangular form, with a considerable projection on the North side. The South point, which is acute, is formed of high white cliffs; one in particular, which is almost insulated, has in many situations the appearance of a sail. On the South-East side, there are two small Bays, and at the bottom of the Northern one, there are several cocoanut trees, where some natives usually reside. The water is very deep on this part of the Coast, about 40 fathoms, 2 miles from the land. From the North-West angle to the North point of the projection, the soundings are very regular. Close to this point, there is a narrow channel, with 7 fathoms, over a reef which extends from the points of the Island almost 3 miles in a North-East direction: between this point of the reef and another extending from an angle of the fourth Island, there is another narrow channel. By the long reef and the two Islands, a small but commodious Harbour is formed. The passage between the third and fourth Islands is shut up to Eastward by Coral Reefs. The North-East angle of the third Island must not be approached closer than 3 miles, to avoid a Coral Reef which appeared to be connected with the Island.

3rd Island.

Harbour Archipelago.

The figure of the fourth Island, as well as its surface, is very irregular, and the soundings round it correspond. On the East side, Ships must not approach closer than 6 miles, as Minerva Bank is situated at that distance to Eastward of the Island, and on some places of the bank there is not more than 2½ fathoms at low water. The East extreme of East Island, North North-West, leads to Eastward of the bank. The East side of the Island is deeply indented, and some parts behind Rugged Island may probably be insulated. Round Hill, which is remarkable from its regular shape, and being the highest land of the Archipelago, forms the North-East angle of this Island: it is seen 10 leagues distant in clear weather. Eastward

4th Island.

Danger.

of this angle, there are several banks which run off a considerable distance: all within the dotted line in the Chart should be avoided.

The passage between the fourth and fifth Islands has deep water in the Western entrance; about the middle there is a reef from the fourth Island; and across the Eastern entrance, there is a bar of sand and coral, with only 3 fathoms on it.

3rd Passage, Archipelago.

The fifth Island is low, and almost bisected by the opposite Bays; on the North and South sides of the Island, the water is deep, and the soundings are pretty regular.

5th Island.

The Bays and Inlets, formed by the three Islands, North of Strait Island (of which Long Island is the Northern), are too confined and intricate to be of material use, though they might afford shelter in the case of being driven in by distress.

Small Inlets.

Abreast of the South end, opposite the middle, and towards the North extreme of Long Island, there are three dangerous patches of coral, about 2 miles distant from the Island. To avoid those and the large coral shoal North-West from the North Button, it will be safe not to approach that part of the Coast closer than bringing the North Button to bear North.

Three patches Coral.

The small Inlet, in Latitude 12° 29′, is very remarkable, having a bold bluff point on either side. The entrance is narrow, and there is not sufficient depth within for Ships. There is an extensive reef from the North point, and there is rocky ground about half a league beyond it.

From this part of the Coast, to the Latitude of 12° 45′, the land rises rather abruptly to a considerable height. The direction of the Coast is almost due North for 5 leagues, and then trends to North North-East to Stewart Sound, with three small projecting points. Between the second and third of those, there is a Coral Bank, which extends a league to Sea, with 10 fathoms on the outer edge, and shoaling very quick from that depth to 4 and 2 fathoms.

East Coast Andaman.

Coral Bank.

Stewart Sound is very extensive, consisting of three large branches. The entrance, in Latitude 12° 53′, is to South of Sound Island, and appeared perfectly clear quite across to Passage Island, which is small and surrounded by a white sand beach. It will appear by the Chart, that the Western, or inner

Stewart Sound.

branch, is well sheltered, and the soundings are regular. The outer or Southern branch is more exposed ; and two patches of coral being found, makes it probable that there may be yet others undiscovered. The Northern branch is more confined, and it has not sufficient depth for large Ships. The passage to Northward of Sound Island is too intricate for large Ships, and it requires further examination.

East Coast Great Andaman.

From Stewart Sound, the Coast runs in almost a direct line North by East. The soundings are very regular, extending from the land a league and a half to the depth of 100 fathoms. There is a break in the land one league and a half North of Stewart Sound, which has the appearance of an Inlet. From the North entrance of the Sound, the land rises abruptly from the Sea, and forms a large ridge, with a regular and gentle ascent to the South peak of the Saddle, which may be seen 20 leagues distant in clear weather. The North peak of the Saddle is due North from the South peak, distant one mile and three-quarters, with a considerable hollow between them. From the North peak, the descent is steep and irregular, and after forming a variety of valleys, terminates in the Southern part of Port Cornwallis. The descent from the Saddle to the Sea is so steep in some places, as to be without vegetation. There is one Rivulet of fresh water, which has its source from the South peak, and there are appearances of several more which have not been examined.

High Land Saddle.

Rivulet.

On this part of the Coast, the soundings extend from it about 4 miles, and are perfectly regular. Craggy Island is bold, having 12 fathoms; very close without it, the North part is connected with the great Island by a reef.

Port Cornwallis.

The entrance of Port Cornwallis is in Latitude 13° 17′. Being the first opening to Northward, and so near the Saddle, marks its situation with peculiar precision. The access is easy, being 2,500 yards broad. It is bounded on the North by a reef extending from Ross Island, and on the opposite side by South Reef, which is separated by a narrow channel from Dundas Point. The Spit, extending from South Reef to North-East, is extremely narrow, and on one small spot there is only 3½ fathoms at low water. Here it

Easy of access.

may be necessary to lay a Buoy, at some future period, when frequented by large Ships. Atalanta Bay is immediately round Dundas Point, and is a good situation to anchor during the South-West Monsoon. St. George Island is situated nearly in mid-channel, 2 nautical miles from the entrance. It is of very small extent, but surrounded by a Coral Reef, which leaves at low water a space of an irregular form, equal to an area of 300 yards square. From this Island, Ships might be much annoyed in their progress up the harbour. At the extremity of the Spit, which extends one mile West from this Island, there is a spot of coral, almost dry at low water, on which it will be necessary to have a Buoy or Beacon.

A danger for large Ships.

St. George Island.

Above St. George Island, the Harbour opens to the breadth of 2 nautical miles, and the depth of one and a half, of excellent anchorage; bounded on the East by Hood Point and the East side of Minerva Bay; by the East side of Chatham Island and Shore Point on the West; and to the North by Minerva Bay, Perseverance Point, and the continuation of the Harbour. The ground is soft, tenacious clay, the depth regular, decreasing from 20 fathoms in the entrance to 10 and 9 fathoms abreast of Perseverance Point. Here the Harbour is contracted to the breadth of 1,600 yards, by the shoulder of Chatham Island to West, and a continuation of the land in a direction nearly North from Perseverance Point to the Eastward. The Harbour extends a mile North from Perseverance Point, and beyond this there is a narrow and intricate channel, which leads to a very secure and convenient Bason, adjoining the Northward point of Pil Island.

Extent of good anchorage.

Regular Soundings.

North part of the Harbour.

North Bason.

The shoulder and North part of Chatham Island is encompassed by a bank with 3 fathoms on the outer edge, about 300 yards from the Island. The continuation of the bank, with a gentle curve and Westerly direction, joins the West point and embraces Ariel Island, from the North part of which it takes a circular direction, enclosing another commodious Bason North of Ariel Island; and then by an Easterly course, terminates on the North-West point of Wharf Island.

Mud Bank.

South Bason.

Within the margin already described, there is a very extensive Mud Bank, portion of which appear at low water. It occupies a space of about 4 square miles. This Flat, termed in the Plan Shoal Bay, is situated to Westward of Pil, Chatham and Ariel Island; it is of an irregular form, with an extensive branch to the North-West, and several Inlets to Southward.

The relative situations will be better comprehended by an examination of the Plan, by which it will appear that the two Basons are well situated to accommodate Ships under repair, and capable of being strongly defended. It will also be perceived, that the range, of the Harbour having a North-West direction, that the prevailing winds (North-East and South-West) will be fair for either entering or quitting this Port.

Basons well situated for defence.

Both Monsoons favorable for entering or quitting the Harbour.

Twelve hundred yards above Perseverance Point, there is a spring of fresh water, which afforded, in the month of February, at the rate of 150 tons per day, and it appeared to have suffered no sensible diminution as late as the 6th of April 1793, which is the latter part of the dry season. This spring is situated in a very convenient part of the Harbour, and issues out of the ground about 20 feet above high-water mark. Adjacent there are two rills, and near Hood Point, another very productive spring.

Fresh water.

The land in the vicinity of the Harbour abounds with timber trees of excellent quality, and fit for all the various parts of Ships.

Abounds with Timber.

The soil and climate promises all that can be expected from the most happy tropical situation.

Soil and Climate.

From Port Cornwallis to the North extremity of the Great Island, and round the group of Islands which encircle it, several dangers have been lately discovered, which will demand attention in the Navigator to avoid.

East Coast Great Andaman.

The Table Islands bear from Ross Island North 13° East, distant 7 miles; they are environed to Eastward with an extensive Coral Reef, and there is, besides this, a ledge of rocks, some of which just appear; they bear from the East extremity of the Islands South South-East, distant one mile and a half; and there are 24 fathoms—a very small distance—with-

Table Islands, Reef and Ledge of Rocks.

N

out the rocks. From extreme East of Table Islands, Pocock Island bears North 18° West, distant 8 miles. The soundings are irregular, with several spots of sand and coral, particularly within the opposite bearings of the Islands: some spots so little as 4 fathoms, at the distance of a league from the land. Without the opposite bearings of the Islands, the soundings are more regular, deepening to 30 and 35 fathoms, about 2 leagues from the land. The Navigator must not be deceived by this false appearance; for immediately without the depth of 35, the water suddenly shoals to 20, which depth will be found within 100 yards of Union Ledge, on which there is only one fathom at low water. The greatest extent of this very dangerous Ledge is in the direction of the meridian, about half a mile; the breadth about 300 yards. The soundings are a little irregular even to Eastward of this Ledge, there being 20 fathoms immediately without it, and beyond that depth, so little as 12 and 10 fathoms, whence it deepens to 30, 50 and 76; and at the distance of 4 miles East of the Ledge, there is no ground with 110 fathoms. From Union Ledge, Pocock Island bears West 25° North, distant 7 miles; the Eastern Table Island South 30° West, the same distance. On referring to the Chart, it will appear, that many lines of soundings have been run between Union and Jackson Ledges, and that the depth is very unequal, it therefore should be avoided, though no dangers have been yet discovered in that space.

Union Ledge very dangerous.

Situation of Union Ledge.

Irregular soundings.

Jackson Ledge is situated one league East of the North extreme of East Island. The extent, in a South-East direction, is nearly half a mile, and the breadth a quarter mile, and the least water on it is one fathom. South-West from this, at the distance of one mile, is situated Ranger Ledge, a small circular spot of 100 yards diameter, with only 4 feet on the shoalest part. It bears from the North extreme of East Island East by North, and distant from it 2 miles. To Northward of those Ledges, I was very particular in soundings, and found very considerable inequalities in the depth, on some spots not more than 5 fathoms; but by a very diligent look-out from the mast-head, I have no

Jackson Ledge.

Ranger Ledge.

Exploration of a safe passage.

reason to think that there is any less than that depth to Northward of Ranger Ledge. Those alarming inequalities of depth do not extend above 2 miles to Northward of Ranger Ledge, and there is a continuation of similar soundings to Westward, extending the same distance round East and Land-fall Islands. This will be found more clearly expressed in the Chart, by a dotted line encompassing the irregularity of soundings, as well as the dangers, with a written explanation.

Passage within the Coral Ledges.

It will be observed by the Chart, that there is a good and deep passage between East Island and Ranger Ledge. For this passage no further direction will be necessary, but observing to round East Island very close to avoid the Ledges to Eastward, the distance of Pocock Island would render the bearings too indeterminate for a mark to avoid the Ledges. During the South-West Monsoon, I think it would be improper to attempt this passage; for a Ship rounding East Island, as close as it can be done with safety, would hardly weather Jackson and Union Ledges.

Cleugh Passage

Cleugh Passage is formed by the North extremity of the great Island, and North-West Island to the South, and with Land-fall Island to the North. There is an extensive reef nearly in the middle, part of which appears above water. On either side of this reef there is deep water, and it will be the safest mode to pass it pretty close, as a mark to avoid more hidden dangers, which will appear in the Chart. The ground in general is coral, with very alarming over-falls, and the tides are irregular. Such passages cannot be recommended, though a knowledge of them may prove useful in particular cases

West Coast Great Andaman to Interview Island

North-West Island is low, surrounded with a Coral Reef, some parts probably extending half a mile beyond high-water mark; it is otherways bold. The soundings Westward from this Island to the edge of the bank are regular, the depth increasing from 12 to 16 fathoms the first 2 leagues; in the remaining it deepens to 40, which is close to the edge of the bank.

Cape Thornhill is a round Hill of a regular form, and has the appearance of being insulated by a narrow channel.

West from the Cape, and distant 2 miles, is Cliff Island, which is steep and rocky, and appears bold to Westward. Two miles to South-

ward, there is a low Island of small extent, surrounded by a reef; between this and Cliff Island, there appears to be very shallow water.

South-West from Cape Thornhill, at the distance of 2 leagues, there is another promontory, but it is flat and low, and it also has the appearance of being insulated, particularly so when viewed from South-West, for on the South side there is an extensive Inlet. This Inlet has an Island near the entrance, and several extensive Coral Reefs, which appear to bar the entrance.

On this part of the Coast, the ground in general is coral, with very great over-falls. South, South-West from the last Inlet, and distant 2 leagues, there is a dry rock, which is situated about one league from the Coast. Two leagues further, and nearly in the same direction, there is a small flat Island about the same distance from the great Island. The line of the Coast from the above Inlet, in Latitude 13° 24′, is nearly in the direction of South, with two projections, in Latitude 13° 20′ and 13° 16′, and there is an appearance of an Inlet East by North from North Reef Island.

The passage to Eastward of North Reef Island to Port Andaman has deep water near the Island; but at the distance of 2 miles to South-East, there is rocky ground, with alarming over-falls in the soundings, which will appear in the Chart.

West Coral Bank.

From North Reef Island, which is in Latitude 13° 0′ 6″, the bank of soundings extend near 6 leagues, and near the edge there is an extensive Coral Bank, reaching from Latitude 13° 0′ 4″ to 13° 25′ 30″. Lieutenant Wales, who examined it in the *Ranger*, could find nothing less than 7 fathoms; but from the irregularity of the sounding and quality of the ground, there probably may be less water. I have an extract from Captain Nimmo, in which he mentions to have had so little as 4½ near the North end of this bank. It certainly should be avoided by large Ships.

Probably dangerous.

Having in a former Report began my narrative with an account of Port Andaman, and continued it progressively along the West Coast and round to Old Harbour, this finishes the circuit of the Andamans.

Natives.

I have, in a former Report, noticed the very rude and uncivilized state of the Natives, which I find now to be general. I gave instances of their hostile inveteracy to stran-

gers. These prejudices may have originated from having been in a state of slavery; but there are certain and recent causes for the continuance of this unfortunate propensity.

Cause of their abhorrence of strangers.

Several of the Natives have been carried off to gratify an unwarrantable curiosity, and others entrapped and sold for slaves. Unless those alleviating circumstances are considered, a most unfavorable and unjust opinion would be formed of the Natives. Our intercourse with those in the neighbourhood of Old Harbour afforded frequent opportunities of observing, that they are susceptible of the most tender impressions, and that their dispositions are happy.

Happy disposition.

It now remains to make some observations on the passage between the Little Coco and Land-fall Island.

The Little Coco bears from the centre of East Island North 22° 30′ East, distant 19 miles, and from the North point of Land-fall Island North 32° 30′ East, distant 20 miles. It is connected with the Andamans by a bank of soundings, the edges of which are nearly parallel to the line of bearings between it and the North extremity of Land-fall Island, and are also nearly equi-distant from it. The major part of the shoal water is, however, on the East side of the line.

Passage between the Coco and the Andamans.

Union, Jackson, and Ranger Ledges afford a striking example of the dangers always to be dreaded where the bottom is coral.

I have already observed, that for the distance of 2 miles to Northward of Jackson and Ranger Ledges, that the depth was unequal. I made a very particular examination further to Northward, by sounding and a good eye at the mast-head. To my great satisfaction, I found no abrupt inequalities in the depth, with a bottom of sand quite across the bank, and there was no appearance of shoal water from the mast-head. Those lines of soundings only, that I can have a certain dependence on, are inserted in the Chart. It will be perceived that North by East from the Little Coco, and distant 3 leagues, there is so little as 12 fathoms, but by re-crossing several times, I could find nothing less than that depth.

Examination of the Passage.

A safe passage.

I shall close this Report with the following observations, which may prove useful to Ships bound for Port Cornwallis, during the South-West Monsoon. This stormy season generally commences in May, with cloudy squally weather attended with heavy rain. The first and latter parts are the most violent. July and August have frequent intervals of two or three days' good weather.

Directions for Ships bound to Port Cornwallis during the South-West Monsoon.

Ships from the Coast of Coromandel should gain the parallel of 13° 39′, which is the Latitude of the North extremity of Land-fall Island, and on a near approach should keep in 13° 43′, but not to Northward. In this last parallel (as will be observed by a reference to the Chart) Ships may cross the bank with safety. If there should be a mistake in the Latitude, and it prove to be the Southward, even as much as 6 or 7 miles, it will be attended with no danger and little inconvenience, provided due attention be paid. If the land should be seen before soundings are obtained (which will always be the case, in the day, with clear weather,) nothing more will be necessary than to bear up to that course, which may be a point and a half to Northward of the most Northerly land seen, and round Land-fall Island at the distance directed. When approaching this land in the night, it will be necessary to have the Ships under such sail as to admit of sounding with 25 or 30 fathoms of line, and to be prepared instantly to bear up on having ground. Should the night be good, and the weather so clear as to see 3 or 4 miles, after sounding 30 or 25 fathoms, Ships in such cases might (with caution) cross the bank. But should the weather prove dark and squally, it would be necessary on having ground immediately to bear up and haul by the wind to North-West. After deepening the water to 50 fathoms or loosing soundings, the Ship might be put on the other tack, and by short boards kept nearly stationary till day-light.

Consequence of a mistake in the Latitude.

Making the bank of soundings in the night.

A case of dark squally weather.

In such cases as the preceding, it would be of great utility were there a Light-House on the North extremity of Land-fall Island. The Northern point is obtuse, with a small eminence, that appears to me an admirablo situation.

Utility of a Light House on the North extremity of Land-fall Island.

A Light House erected on this spot would be an excellent mark to make the land, and to avoid those dangerous Coral Ledges to Eastward.

I am, with great respect,

My Lord Marquis,

Yours, &c.,

(Signed) ARCHIBALD BLAIR.

CALCUTTA,
*May 27th 1793.*

JOHN GRAY, "CALCUTTA GAZETTE" OFFICE.